THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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WHITHER THE PRIVATE ARCHITECT?

THE national austerity programme, with its prohibition of practically all forms of building, is an even more serious blow to architects and builders than was the stoppage of private enterprise building at the beginning of the late war. Apparently, the only kind of building work now to be permitted is that essential for the maintenance and further development of export-producers, with possibly a small modicum calculated to help agriculturists increase their production; all else must stop. Whilst the nation as a whole may "Work or Want," most people in the building world have no choice: not allowed to "Work" they can merely "Want," until once more they may be free to contribute their specialised experience and skill to help in the problems of reconstruction.

Though the discussion must at the moment be but academic, it may not be entirely unprofitable to consider once more the future of the private architect in general practice, the vastly changed conditions which he now has to face and what hopes he may still have — not only of making a decent livelihood but of maintaining and advancing the great ideals he is proud to serve.

Architects have, in the past, always depended upon the patronage of the wealthy for the great majority of their best opportunities, and it has long been obvious that the redistribution of wealth which has accompanied modern social changes must as a natural corollary seriously reduce the hope of obtaining such commissions. But, simultaneously with the decline of the rich and powerful individualist client, came the first expansion of the powers of elected councils—rural, urban, county—which, under greatly enlarged government departments, has now developed into an over-riding control of every branch of public social activity. In the progress of this development many architects, for various reasons, became staff officers: some no doubt, because the type of work specially appealed to them temperamentally, others, "broken in the wars" of private practice, for the sake of greater security, maybe because they foresaw the day when (as in the immediate future at least) a council of some kind or other will be practically the only client available to those who remain in private practice.

The lot of the average official architect must necessarily embrace much wearisome routine: the preparation of endless reports, schedules, returns, the tedious discussion and explanation of technical details with uninformed but keenly-interested committees, the collection and dissection of comparative statistics, all, no doubt, necessary duties of his office. Brilliant exceptions will, from time to time, emerge, but as a general rule the man oppressed by the nagging monotony of inevitable routine for a large part of his day must come tired and dispirited to what should be his main task, architectural design: a task which above all demands fresh and clear vision, a lively and resilient imagination. Other things being equal, it would seem to be indisputable that the unattached architect, unfettered by rules and precedents of procedure or by the necessary cares of office, is far more likely from his greater freedom of environment (as well as, inferentially, from his more independent temperament) to evoke in his work that "divine afflatus" which should always inspire the highest traditions of virile and progressive design. Yet, despite this conclusion, which seems obvious, the private architect to-day has few opportunities to contribute in any form, and least of all in any progressive direction.

Housing, for example—that branch of building which of old formed the larger proportion of the average "G.P." architect's work—is now (and is likely to remain for some time) restricted to schemes promoted by local councils, financed by Government loans. Generally the plans are prepared by officials, more rarely by independent architects, but, in any case, they are subjected to meticulous comparison and criticism by local and area housing officers, themselves rigorously controlled by headquarters in Whitehall. Hence, inevitably, housing design has become almost static, any but the most trivial departure from the published type-plans being frowned on—whatever its intrinsic merit—since this would involve deviation from the card-indexed methods of comparison and costings and entail independent and original investigation for which few officials under the present difficult conditions have the time. The design of hospitals, schools and "public utility" buildings generally is now subject throughout to a similar system of controls, and in every direction we find the results appearing in what a painter would call an "all-overish" flatness of mediocrity which is arising not from the limited palette of materials now available but from the over-rigid similarity of handling imposed by inelastic regulations. What else can be expected from a system of control which inevitably favours a close adherence to the standard and penalises by delays any novel or original departure? And so architectual design has now become little more than the laborious piecing-together of an unalterable number of specified and invariable units to occupy a prescribed volume of space: a sort of glorified jig-saw puzzle in three dimensions. The solution may show some slight modifications, but must always bear a very close resemblance to the picture on the lid!

If all building in the future is to be commissioned and directed by departments, we may at once abandon most of our ideals about the active and virile advancement of architectural design in Britain.

It may be that before very long a "National Building Service" may seek to enrol all qualified architects under its ægis, just as a "National Health Service" hopes to absorb all qualified doctors. We live in changing times: who can tell what may evolve during the next few difficult years? Architects may have to call on the "Mother of the Arts" to take her place humbly in the queue seeking, like the mothers in the home, bare rations for her hungry children. To creep quietly and unobtrusively under the umbrella of the public service may be the only means of survival for a while.

And if architecture were merely a profession, a means of earning a livelihood, it might thus disappear by the absorption of its practitioners into departmental officialdom, frustrated and disheartened.

But it is far more than that. To its true followers it is a vocation, a religion, an intangible but very real

expression of the thought and emotion of a nation or an epoch, a living tradition from the immemorial past which inspires and invigorates the hopes for the future. It is unthinkable that it shall be emasculated by the steadily growing incubus of standardised controls and denied all prospect of free and vigorous growth. So we gladly welcome the efforts suggested in our correspondence columns last week by Mr. John Swarbrick to press the right of private architects to a fair share of work, not only on economic grounds but because we are convinced that thus only may architects save for posterity the true spirit of the art they serve.

HOUSING, 1947-48

JUST as the first practice of deceit involves a consequent tangled web of further tergiversation, so any initial mistake perversely pursued is liable to bring in its train a series of consequential errors. This truth now finds the Minister of Health floundering in a morass caused by his earlier refusal to take the advice of those who knew regarding the best method of getting the post-war house-building programme under way.

The issue by the Ministry of Circular 160/47 (printed in this issue) is a frank avowal that the costly mistakes of 1920 have been repeated and that the Government have no better solution to offer than that which was applied then by Eric Geddes and Alfred Mond. Too many horses have been started in the race; those that have fallen or are jostled out of position are to be removed to clear the field for the others. This is to the good only because it is absolutely necessary. The breaching of contracts which ought never to have been entered into is bound to involve hardship and to be a costly process, but a greater sense of realism will be introduced. Unfortunately it is not at all likely, housing being an explosive political subject, that we shall yet be told how much all this blundering has cost and will cost the public purse.

We observe that much credit has been taken for the fact (or at least the statement) that "timber to build many of these houses is already in hand." We have heard much complaint that building has been held up because the timber, although known to be in hand, could not be released until the next licensing period. This appears to be carrying the red tape of control beyond the comprehension of any but the bureaucrats by whom it is administered. It is satisfactory too to know that "there is a store which the hard work of the Health Minister has accumulated and which can now be put to good purpose in enabling us to finish more than would otherwise have been possible." The existence of these secret stores has long been known to the industry, who could have improved their past performance if they had had access to them, but the Minister professed ignorance of their existence and said in effect "Show me where they are and I will release them." Has he been ignorant of his own good work in putting something away into the cupboard for the rainy day which he feared was bound to come?

The suggestion that early results may be anticipated from the adoption of bonus-on-output is somewhat naive. It has taken the industry two years to secure the acceptance of the principle; the working out and putting into effect of detailed schemes can hardly be expected in the matter of two weeks.

We are afraid this Circular merely marks the first stage on the road back to realism.

NOTES AND NEWS

Education without Tears.

WITH the lights of the architectural world fast going out (we hope very temporarily), it was with a mixture of apprehension and hope that we viewed the Exhibition of School Designs to be carried out by local councils in England, now on show at the R.I.B.A. The work covers nursery, training and secondary schools, and—under a large banner which proclaims rather ominously but also very truthfully that "We shape our buildings and afterwards our buildings shape us"—a most interesting selection of school schemes is to be found. The work, drawn from all parts of England, shows a commendable advance in school design—open planning, reduced number of floors, and in most cases a definite accent upon good lighting in the buildings, all points which in the past have received scant respect from school designers, due partly to the curious tradition of building schools but rarely upon open sites, and if open sites were used, then leaving as much land as possible for games, etc., which resulted in a multiple-storeyed building.

Site situation and restriction, therefore, played a large part in school design in the past; now the site appears to play quite a subservient part to the building. Obviously, in country districts this presents few difficulties, but we were extremely interested to see how the L.C.C. were proposing to deal with the problem in London. The answer could be—tolerably well, although one scheme for a comparatively confined site reaches quite a high level of whimsy in its intricate planning, and another scheme of three storeys appears to have elevations by Paul Hedquist, the Swedish architect; this is in itself, however, not a particularly bad thing, as this style has a marked Regency flavour.

We came away impressed, as one must be when confronted with such clear-cut, healthy-looking structures, and compared them with the average council school of forty years ago. The inclusion, however, in the exhibition of two comparative photographs of groups of boys, one taken fifty years ago and one recently, seems merely to take advantage of the advance in photographic art and the more liberal use of soap, water and hair combs!

And lastly, where will our public schools land up after all this? These venerable institutions have up to now been able to point to the average school of lower denomination with the accusation that at least there is nothing to choose between them as regards architectural amenities. In the face of the new school programme things may possibly take a very different turn, and many public schools with their spartan appointments will have to look to it if they are to keep their pride of place in the nation's educational set-up.

Plan for the Present.

THE recent C.I.A.M. Congress at Bridgwater has been explained in terms of human interest in a recent number of the weekly "Illustrated." The article (headed by a large photograph of a certain house at Hampstead, of which it said that "Architects who met at Bridgwater had this kind of design very much in mind") introduces the architects and their tasks. They are written up with some excellent photographs, including one of our own Professor Holford toying with a model of what could easily be the famous "South Bank."

Out of this meeting, a meeting consisting of the leading planners from many ruined cities—planners attempting to grapple with the greatest tragedy of modern times—it seems odd, naïve, call it what you will, to hear from Professor Gropius in this vein: "Curious how haphazardly people begin to rebuild their ruined towns. A little shop here, a hut there. Improvised buildings emerge in a sea of wasteland and perfunctorily organised planning." In this statement the lot of the common man who is alive to-day, and has to somehow keep alive, is completely ignored. To be able to sit back and watch the machinations of the various Government departments dealing with reconstruction, and feel no personal loss, could be amusing; but few people can do this, and recently, according to a daily paper, even an attempt in this country to rebuild a shop in a coastal town attended the "little man" with dire results. What Harvard professors, with their far-seeing reconstruction plans must realise is that there is in existence an interim period terrible in its intensity. If thousands of little shops and homes or huts could be

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built overnight, the move would be all to the good. Reconstruction, as Professor Gropius sees it, must and will come, but in the meantime people with perhaps twenty more years to live will insist on living, somehow.

R.I.B.A. Inaugural Address.

THE inaugural meeting of the R.I.B.A. session, 1947-48, will be held on Tuesday, November 11, at 6 p.m., when the president, Sir Lancelot Keay, K.B.E., will give his inaugural address and will afterwards present the London Architecture Bronze Medal to Messrs. Farquharson and McMorran for their building, the Blackheath-road Police Section House. Tea will be served from 5.15 to 5.50.

A Lutyens Memorial.

So widespread is the volume of Sir Edwin Lutyens's work that the reply given to the visitor to St. Paul's Cathedral who asked where was Wren's memorial, and received the reply, *Si monumentum requiris, circumspice*, is hardly applicable. The Lutyens Memorial Committee are therefore to be congratulated on their action in commissioning Mr. Christopher Hussey and Mr. A. S. G. Butler to write on Lutyens's life and work, so that a permanent record may be available within covers of the wide and rich variety of the great architect's work. The book, which will be in four volumes, will be sumptuously produced, the size of page (10 in. by 15 in.) lending itself to the large-scale reproduction of drawings and plans, and also to the photographs, of which there will be about 300 in each of Mr. Butler's volumes, besides 120 plates specially drawn from the originals. There will be much new material, including examples of his sketches. The Memorial Committee, in a letter elsewhere in this issue, bring to the notice of subscribers the special conditions by which a discount of 25 per cent. on the published price of 25 guineas will be given to all subscribers of not less than one guinea, given before March 31 next, to the Memorial Fund.

Mr. E. G. Hicks, M.P., C.B.E.

WE offer our congratulations to Mr. Ernest George Hicks, M.P., on the award of a C.B.E., with which he was invested by the King on Tuesday. Mr. Hicks was Parliamentary Secretary, Ministry of Works, during the Coalition Government.

Visit to Italy.

AT the request of the British Council Mr. ANTHONY M. CHITTY, M.A., F.R.I.B.A., A.M.T.P.I., will visit Italy in December to open the exhibition "Replanning Britain." The exhibition will be shown at Milan before going to other European countries. Mr. Chitty will give lectures on the town planning and housing problems of Great Britain.

Their Majesties' Visit to St. Austell.

ON October 30 the King and Queen visited St. Austell, where they inspected the "Cornish Unit" houses designed by Mr. A. Edgar Beresford, F.R.I.B.A., and built for St. Austell U.D.C. by Messrs. John Williams and Co. (Cornwall), Ltd., using blocks made of waste china clay by the Central Cornwall Concrete and Artificial Stone Co., Ltd. The houses were illustrated in *The Builder* for December 13 last. The King and Queen expressed themselves as delighted with the houses, and Princess Elizabeth was pleased to accept the offer by the Duchy of Cornwall to erect a pair of "Cornish Unit" houses on the Surrey estate which will be her home after her marriage.

THE LIBRARY, SIDMOUTH. A drawing by Mr. E. B. Musman, F.R.I.B.A., in the A.A. Members' Exhibition. (See page 511.)

Recent Appointment.

MR. A. G. RICHARDSON, Deputy Borough Engineer of South Shields since 1934, has been appointed Borough Engineer of Burnley (Lancs), at £1,250 per annum, rising to £1,400 plus bonus.

COMING EVENTS

Monday, November 10.

ROYAL INSTITUTION OF CHARTERED SURVEYORS. First Ordinary General Meeting of the Session and Presidential Address by Mr. R. W. Trumper, P.R.I.C.S., 12, Great George-street, S.W.1. 5.30 p.m.

ROYAL SOCIETY OF ARTS. Cantor Lecture on Industrial Design. "Modern Danish Design," by Prof. Steen Eiler Rasmussen, Hon. R.D.I., R.S.A. John Adam-street, Adelphi, W.C.2. 4.30 p.m.

ENGINEERING AND INDUSTRIAL EQUIPMENT. Exhibition. Old Horticultural Hall, London. Continuing until November 14.

Tuesday, November 11.

ROYAL INSTITUTE OF BRITISH ARCHITECTS. Inaugural Meeting and Address by the President, and presentation of London Architecture Bronze Medal. 66, Portland-place, W.1. 6 p.m.

INSTITUTION OF CIVIL ENGINEERS. Informal discussion on "In-situ Piling," introduced by F. S. Snow, M.I.C.E., Great George-street, S.W.1. 5.30 p.m.

ILLUMINATING ENGINEERING SOCIETY. Mr. W. F. Widnall, B.Sc., M.I.E.E., on "The Design of Industrial Lighting Equipment." E.L.M.A., Lighting Service Bureau, 2, Savoy-hill, London, W.C.2. 6 p.m.

Wednesday, November 12.

ROYAL SOCIETY OF ARTS. John Farleigh, A.R.E., on "Craftsmanship—(i). The Crafts—Their Past, Present and Future." R.S.A., John Adam-street, Adelphi, W.C.2. 2.30 p.m.

LONDON MASTER BUILDERS' ASSOCIATION (Central Area No. 1). 62nd Area General Meeting and Luncheon. Derry and Toms Restaurant, Kensington High-street, W.8. 1 p.m.

REINFORCED CONCRETE ASSOCIATION. Meeting. "Trends in Reinforced Concrete." Institution of Civil Engineers, Great George-street, S.W.1. 6 p.m.

Thursday, November 13.

INSTITUTION OF STRUCTURAL ENGINEERS. "Recent Trends in Structural Welding," by Dr. O. Bondy, 11, Upper Belgrave-street, S.W.1. 6 p.m.

Friday, November 14.

THE INSTITUTE OF WELDING. Lecture on "Training for Industry," by Professor D. Hanson, D.Sc., Royal Society of Tropical Medicine and Hygiene. Manson House, 26, Portland-place, W.1. 7.30. p.m.

From *The Builder* of 1847

Saturday, November 6, 1847.

GOODWIN SANDS: ANOTHER BEACON SWEPT AWAY.—The iron tubes of Dr. Potts may still remain, but the beacon erected on them has shared the fate of all its predecessors. It was washed away by the violence of the storm of the 23rd ult. . . . In our next number we hope to afford some clue to the cause of this unfortunate event.

WORCESTER

DEVELOPMENT PLAN

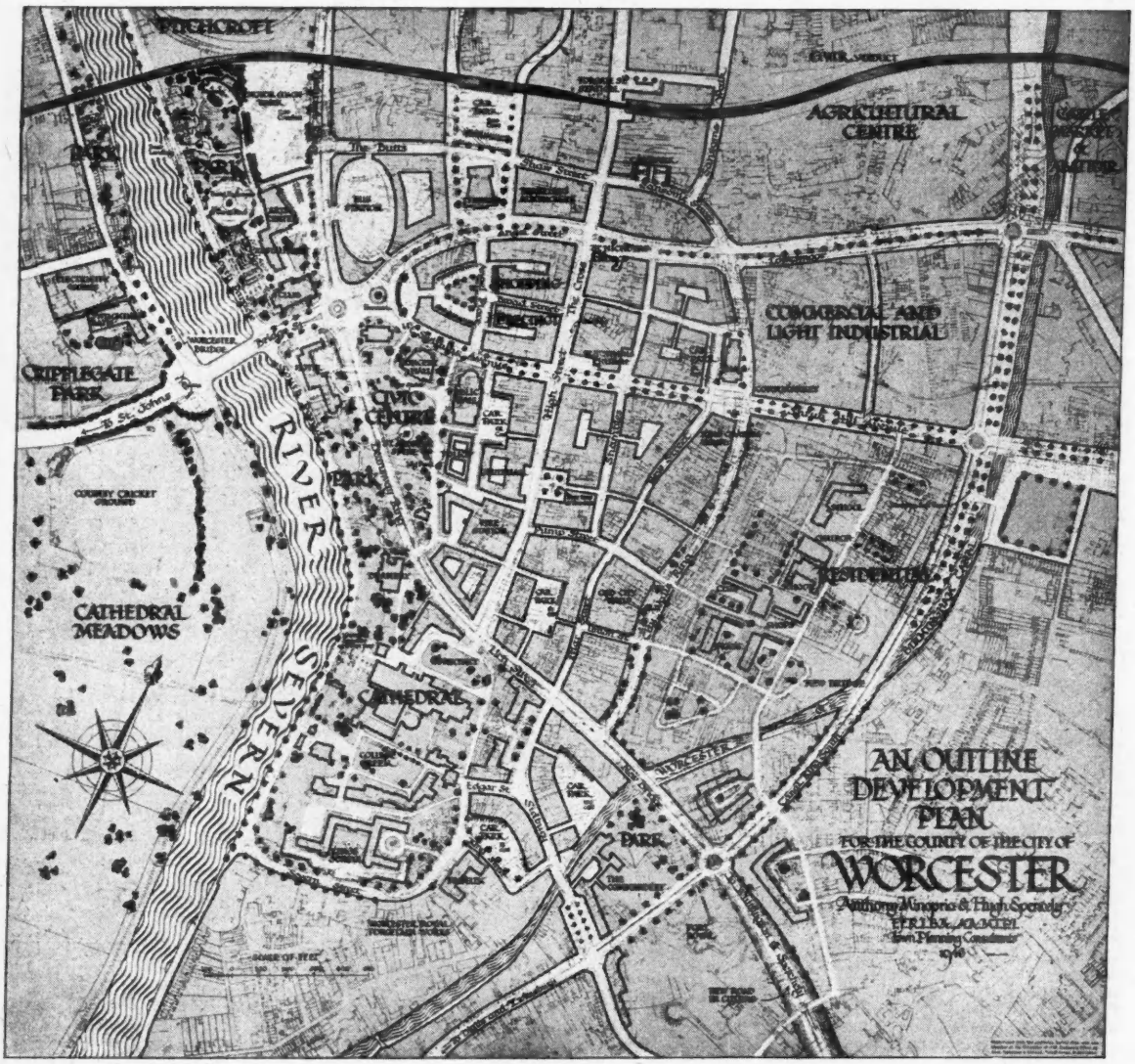
MINOPRIO & SPENCELY, FF.R.I.B.A., AA.M.T.P.I., PLANNING CONSULTANTS

Reviewed by H. V. Lanchester, Litt.D., F.R.I.B.A., M.T.P.I.

THIS plan is stated by its authors, Anthony Minoprio and Hugh Spencely, to be based primarily upon the comprehensive civic survey by Professor Sargant Florence and Miss Janet H. Glaisyer (which was reviewed in our issue of January 31, 1947), and while accepting the general dispositions for the city advocated in that survey, offers as its main addition to these a more detailed plan for communications in the central area with specific recommendations for the civic centre, the setting of the cathedral and the provisions for recreation.

The survey suggested that the population of Worcester would not increase much above 61,000, but this report takes the

The Guildhall, Worcester. Thomas White, Architect (1724).

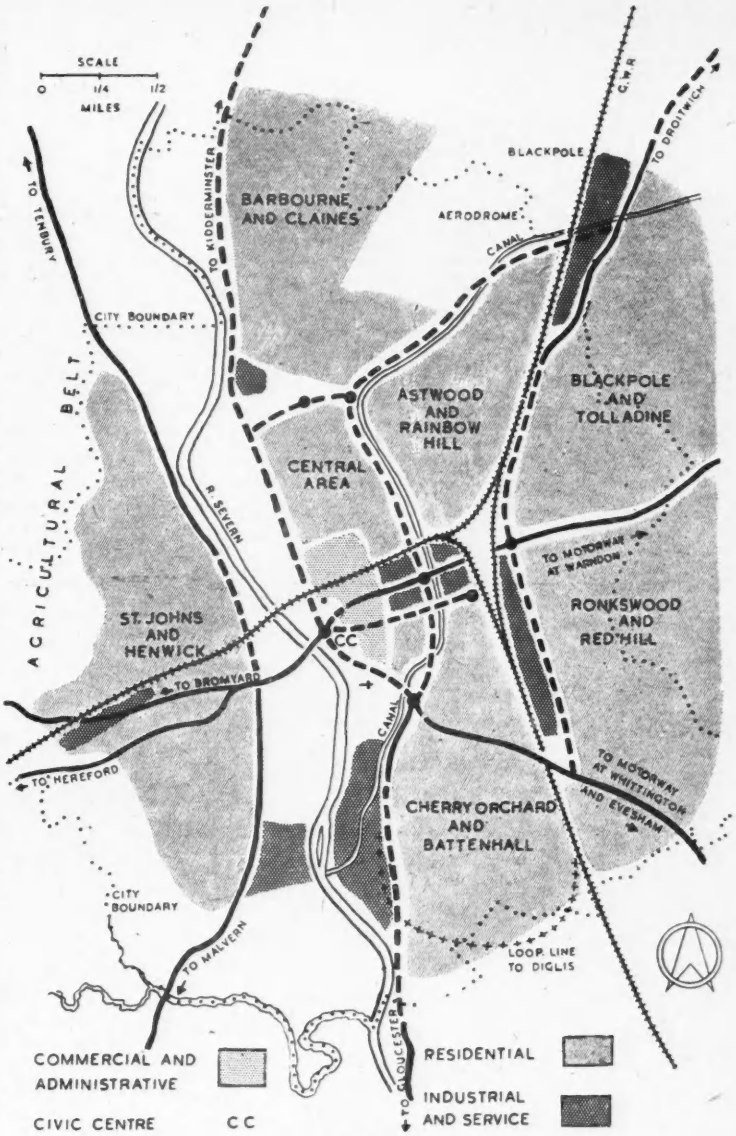


view that it is wiser to visualise the possibility of growth up to 75,000 and that the outline plan should be flexible enough to provide for this increase in growth. While the outer parts are regarded as subject to variation, in the centre it is important to define the plan, as the improvements here are demanded by the structure of the city as a whole and would be increasingly difficult to provide the longer they were postponed. It is assumed that the proposed National Motorway from Birmingham to Bristol running to the east of the city will be constructed in the near future and will divert much of the heavy through traffic, leaving the problem of the inner road pattern that of providing for local requirements.

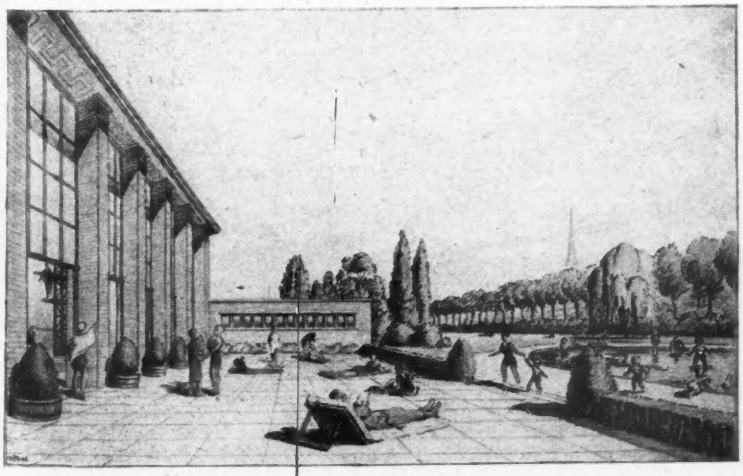
It is unfortunate that the expansion during the last century, when the population doubled itself, has been by no means in accordance with the modern views on town planning. Factories and housing are crowded together in the centre, between the High-street and the river Severn and along the Birmingham canal. Owing to this it is not only the road system which is in need of replanning; the jumble of shops and houses, patches of high-density, low-grade housing, and lack of open spaces and other amenities all need attention, while the survey recommended the encouragement of holiday and tourist traffic by the provision of improved amenities and services, and an extension of the city's hotel and catering facilities.

The plan provides a road pattern for the centre, with good communication between the principal features, mainly by cutting new routes through inferior property and only widening the existing busy thoroughfares to a very limited extent (see plan). Extensive clearances are made between the cathedral and the bridge and for the present inadequate route to the main railway station at Shrub Hill a broad and direct avenue is substituted. The importance of the cathedral has dictated a close and intimate study of its surroundings with a view to the opening up of the structure from various viewpoints.

The importance of Worcester for retail distribution draws attention to the need for improving the shopping facilities. The present location in and around the High-street has the disadvantage that this and the neighbouring thoroughfares are often seriously obstructed by parking cars and other vehicles; an area is therefore allotted between the Cross and the bridge provided with a square and other spaces for car parking; a supplementary centre is also planned across the river, and there would be other local groups at various



Proposed Roads, Residential and Industrial Areas.



points selected to meet the convenience of the outer residential areas.

While there are a number of interesting old buildings in Worcester, the general level of architecture, with a few exceptions, is not high, and it is important that the standard should be raised for those forming the structure of new improvement schemes, but it is not enough that individual buildings should be well designed; in a city their relationship with the adjoining streets and open spaces is equally important. Not only the siting, but the scale and general proportions, and the colour and texture of materials, need to be controlled in the interests of the city as a whole. Attention has also to be given to the design and placing of street furniture and the regulation of advertisements. The construction of new and wider roads and the creation of new parks and open spaces

Left: The proposed Swimming Bath and Paddling Pool in Cripplegate Park.

will offer numerous opportunities for the planting of beautiful trees; the view is expressed that the city of the future will regard trees and flowers as the normal accompaniment to most streets and that arboriculture will have a considerable influence on the layout of roads and buildings. Dr. Wilfred Fox and the Technical Committee of the Roads Beautifying Association have provided a list of trees and shrubs suitable for various positions in the scheme.

Worcester has 694 acres of open space, equal to 12 acres per thousand inhabitants, but nearly half this area is composed of private recreation grounds and allotments, leaving six and half acres per 1,000; moreover, the area for schools is only about a third of that recommended by the Ministry of Education and the public parks are distributed in a very uneven way, while some of the area is liable to flooding. Recommendations are made as to additional areas and to the development of these and the existing open spaces, to afford facilities for more playing fields, a stadium, swimming bath and other amenities. It is regarded as important that the riverside land should be kept open as far as practicable.

Other matters dealt with in the report include a general programme for car parking, the reconstruction of the railway stations, additional civic buildings and places of entertainment, the future of the airport and the general treatment of the zoning, the last-named following the main lines laid down in the previous survey before referred to.

SOCIETIES AND INSTITUTIONS

R.I.B.A.

Notes from the Council Minutes.

FOLLOWING are notes from the minutes of the Council meeting of October 14 :—

THE HONORARY FELLOWSHIP : Her Royal Highness the Princess Elizabeth has been graciously pleased to accept the Council's nomination for election to the Honorary Fellowship.

ASSOCIATION OF ARCHITECTS OF THE NETHERLANDS : Mr. A. J. van der Steur, President of the Board of the Association of Architects of the Netherlands, addressed the Council. The Council requested Mr. van der Steur to convey to his Association their expression of cordial good wishes and friendship on behalf of the Institute.

MEMORIAL HOMES FOR AGED PEOPLE : At the request of the Chairman of the Aged People's Homes Committee of the Lord Mayor's Air Raid Distress Fund, the following members have been appointed as a panel to advise on plans submitted for the erection of groups of houses in a number of cities and towns : Mr. C. H. James, R.A., Mr. Edward Armstrong, and Mr. I. B. M. Hamilton.

MEMBERSHIP OF COUNCIL.—Lieut.-Colonel F. J. Taylor (F.), Representative of the Devon and Cornwall Architectural Society, has resigned from the Council, and Mr. H. V. de Courcy Hague (F.), President of the Society, has been appointed in his place.

Mr. C. H. Aslin (F.) has been reappointed Chairman of the Official Architects' Committee and a member of Council ex-officio.

Mr. P. K. Hanton (F.) has been reappointed as representative of the Salaried Members' Committee on the Council.

REVISION OF THE R.I.B.A. SCALE OF PROFESSIONAL CHARGES : In accordance with by-law 38, the Council, having considered observations submitted by members, confirmed their decision made June 24 last that the Scale of Charges should be amended as follows :—

(i) £200 and £4,000 be substituted respectively for £100 and £2,000 as the contract sums applicable to the basic percentage scale under Clause 2 (a) (ii).

(ii) Until further notice, on all final accounts for fees chargeable under Clauses 2 and 7 up to and not exceeding a total of £1,150 there shall be a surcharge of 15 per cent. on the first £1,000 of the fee.

The Council decided that the effective date for these amendments to come into force shall be December 1, 1947, and that the amendments shall not be applied retrospectively to any work for which instructions had been given to the architect prior to this date.

CLAIMS FOR COST OF WORKS PAYMENTS : FEES : The Council approved a recommendation of the Practice Committee that Clause (ii) of the Scale of Fees for the Assessment and Agreement of War Damage Claims approved in March, 1945, be withdrawn, and that members be advised in future to calculate fees for services in connection with claims for Cost of Works Payments on a "quantum meruit" basis.

SCALE OF FEES FOR STATE-AIDED MULTI-STOREY FLATS : The Council approved the terms of the "Interpretation" of Sections A2 and A3 of the Scale of Fees for State-Aided Multi-Storey Flats. The terms of the "Interpretation" have been agreed by the Ministry of Health, and are incorporated in the reprint of the Scale issued in July, 1947. This reprint has been published in the October Journal.

CHRISTMAS HOLIDAY LECTURES FOR CHILDREN : Mr. Richard Sheppard (F.) has accepted the Council's invitation to give the Christmas Holiday Lectures to Children at the R.I.B.A.

GIFT PARCELS : The Council record with deep appreciation and gratitude the generous action of the Royal Victorian Institute in sending to some three hundred architects or their dependants in the United Kingdom Christmas gift parcels of food. The names of recipients have been selected in conjunction with the Architects' Benevolent Society and the Presidents of the Allied Societies.

Examination for Building Surveyors.

At the R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities, held on October 8, 9 and 10, ten candidates presented themselves, and the following were successful : Mr. C. K. Briggs, Nottingham; Mr. W. H. Hale, Hartford, Hunts; Mr. H. Latham, Wigan; Mr. W. E. Marshall, Burnley; Mr. E. F. Payne, Blackwood, Mon.; Mr. C. Reid, Stranraer.

R.I.C.S.

Junior Organisation Meeting.

AT a meeting of Junior Organisation Quantity Surveyor members of the Royal Institution of Chartered Surveyors held on October 23, Lieut.-Col. H. A. ACKLAND, O.B.E., F.R.I.C.S., gave an address on "Pitfalls for the Junior Quantity Surveyor." In the course of a very entertaining talk Colonel Ackland dealt with some of the perplexing problems which arise when starting in practice, in relations with clients, architects and contractors, in the public service, in the settlement of claims under building contracts and when entering into partnerships. That young surveyors would be well advised when accepting commissions for work to ascertain that the client was aware of the function of the quantity surveyor and the fees payable for the service; to try to preserve strict impartiality and independence at all times; and not to hesitate to seek the advice of older and more experienced members when up against a serious problem, was some of the sound advice given. He concluded his address by saying, in relation to partnerships, that as much if not more care should be exercised when choosing a business partner as when choosing a partner for matrimony.

Colonel J. B. Marks, O.B.E., F.R.I.C.S., was in the chair at the meeting, which was preceded by an informal meal at the Talbot Restaurant, E.C.2.

INSTITUTE OF REGISTERED ARCHITECTS : ANNUAL DINNER

THE annual dinner of the Institute of Registered Architects was held at the Park Lane Hotel, London, on October 24.

Proposing the toast of "The Institute" MR. LEWIS SILKIN, Minister of Town and Country Planning, said that every architect came within the orbit of planning and he believed that all the Institute's members had a keen appreciation of the need for planning and planned control. Indeed, he would like to meet the architect who did not agree with planning in these days—he could not be a very good architect.

Replying, MR. W. H. SCANLAN, F.R.I.C.S., the President, said : Planning has become a commonplace with us but it is fundamental to architectural practice that we appreciate not only its purpose but its limitations. Surely it is rational at this time to think in terms which have for their end the provision of accommodation as speedily as possible by utilising every building that remains to us. Many of our plans presuppose a destruction of existing buildings and this cannot be justified.

Many of our younger architects who served in the Forces during the war have found it impossible to continue in private practice and have been thankful to accept positions in the safe arms of the Civil Service or Local Government, thereby sacrificing that individuality and pride of personal achievement which is the essence of the profession. I am apprehensive for those now in training schools. How are they, in these days, to find that practical experience which is so essential to the completion of their education? There is no better training ground than the office of the private practitioner, for there is gained that invaluable asset, a measure of responsibility and contact with the daily problems of building.

The toast of "The Guests" was proposed by MR. CLIFFORD WILSON, M.Inst.R.A., and SIR JOHN ANDERSON, M.P., responded.

COMPETITION NEWS

Publicity Board, Crawley.

The Crawley and District Community Association have recently invited designs for a publicity board which would be set up on an open site for the purpose of showing a diary of future events, announcements, etc. The maximum width of the board was to be 12 ft. The assessor, Mr. Richard Llewelyn Davies, has now made his award as follows :—

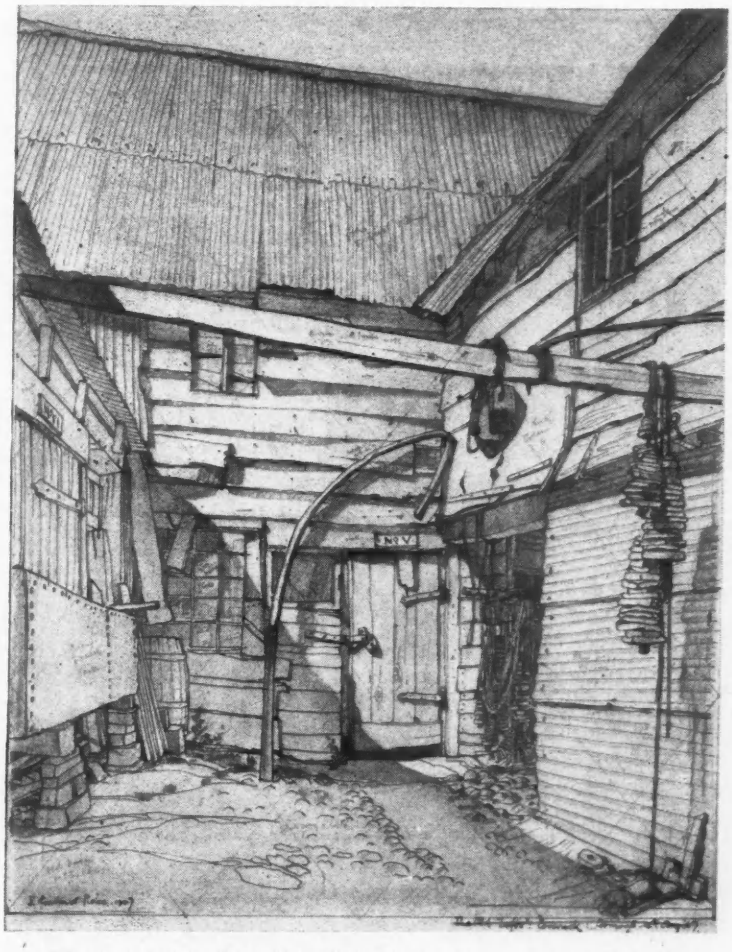
1st. No. 9 : S. Tribe, 198, Gloucester-ter., London, W.2.

Commended. No. 10 : M. Hennings and G. F. Goodwin, 51, Stoneleigh Park-rd., Ewell, Surrey; No. 6 : B. A. P. Winton-Lewis and B. D. Kett, 12, City-rd., Finsbury-sq., London, E.C.1.

Seventeen designs were submitted and will be exhibited on Saturday, November 15, and from Monday-Friday, November 17-21, inclusive, at Crawley School, Robinson-row, Crawley.

A.A. HOLIDAY SKETCHES

It is obvious by the display on show at the Architectural Association that the students are back and settled down to work. A small number of older members also contribute. The quality of the work surpasses that of many previous shows. Subjects and media of expression are varied, but oil colours are much more in evidence. It is difficult to select many subjects for mention when so many are possessed of equal merit. No. 11, "Beach Street, Deal," a monochrome by E. B. Musman, conveys the impression of a gusty, windy day, with figures battling against the gale. No. 14, "The Library, Sidmouth, Devon," is a distinct contrast to the former. Reproduced on p. 507, it depicts the dignity and refinement of Regency architecture, though the door surround appears a little out of drawing. Mr. Musman's work is painter-like in execution, unlike some of the others in which the draughtsmanship announces itself before the subject-matter. No. 26, "Cadgwith, Cornwall," by Norman Westwood, is a good, clean, unlaboured water-colour, pleasing in its colour. No. 23, "A Station Group," by F. Carden, a pencil drawing of two Oriental figures, shows promise by the unhesitancy of its lines. No. 29, "Tarantella Dance," by Margot Gilbert, is a spirited if slight pencil drawing of a dancing girl. No. 37, "Tidal Mill, Essex," and No. 47, "St. Mary Overy Staithe, Southwark," are two excellent lithographs by Julian Leathart; our only criticism would be that the tone value of the backgrounds is equal to the foreground. No. 45, "The Old 'Lofts,' Coverack, Cornwall," by S. Rowland Pierce, is a capital pen-and-ink outlined drawing with light pencil shadows; it is a study for a picture, but quite pleasing as it is represented (illustrated). No. 49, "Dusky Maid (a boat) on Breydon Water," by W. A. E. Sewell, a water-colour, shows a sailing-boat in full sail; here movement, wind and sailing weather are well suggested. Nos. 55 and 56, "View from the Grand Hotel, Calcutta," and "Naini Tal, India," by Desmond Henly, are two very interesting and pleasing drawings in pen-and-ink and colour-wash. The oils make an excellent display; our choice here goes to No. 107, "Still Life," by Marjorie Morrison—a simple subject of a variegated climber, Tradescantia, in a little pot with fabric curtain background, all in excellent taste and colour; if anything, the frame is a bit too detailed for the simplicity of the picture. Many other exhibits of the "old 'uns" show their practised hands. The exhibition is open up to Friday, November 21, 10 to 6, at 34-36, Bedford-square, W.C.1.



THE OLD "LOFTS," COVERACK, CORNWALL. From a drawing by S. Rowland Pierce, F.R.I.B.A., in the A.A. Members' Exhibition.

THE ARCHITECTS' REGISTRATION COUNCIL

62ND QUARTERLY MEETING

The 62nd ordinary council meeting of the Architects' Registration Council of the United Kingdom was held on October 17 at 66, Portland-place, W.1, with Mr. Sydney Tatchell, C.B.E., F.R.I.B.A., in the chair.

Arising out of the minutes of the March meeting the Registrar reported that the Privy Council had approved the amendment to Regulations by the withdrawal of Regulation 26(7) and the substitution of the following in its stead :—

A person shall be eligible for Registration under the principal Act if his application

(1) Is supported by a resolution passed by the Council of one of the bodies referred to in paragraph 1, sub-paragraphs (i), (ii), (iii), (iv) or (v) of the First Schedule to the Principal Act or by all the elected representatives referred to in sub-paragraph (vii); and

(2) Is recommended for acceptance at a meeting of the Admission Committee at which not less than 15 members are present, provided that not more than two members vote against the application, or abstain from voting.

Discipline Committee.—This Committee reported on a case in which an architect had used letter paper bearing the heading "Architect and Builder," and found that the respondent had been guilty of conduct disgraceful to him in his capacity as an architect. The architect was, by resolution of Council, disqualified from registration for a period of three years.

Two architects, who had been fined at Southampton and Durham Assizes respectively for carrying out work in excess of the licences, were severely reprimanded and warned against any repetition of the offence.

Board of Architectural Education.—The General Purposes Committee have under consideration (it was reported) the question whether existing maintenance grants on A.R.C.U.K. scholarships are adequate, having regard to the increased cost of living, and to the accumulated balance in the scholarship fund. They will report to the Board in due course.

Admission Committee.—Only 90 applications of the 5,572 made under the 1938 Act and under Regulation 26 now remain to be dealt with; 217 applicants were admitted at the current meeting and 30 rejected. The appeals of Alfred Quinton Cook (Woodford Green) and John N. Heath (London) have been allowed since the last meeting of the Council. Five appeals have been dismissed.

Finance and General Purposes.—It was reported that 330 retention fees were outstanding. The names of those practising in this country will, failing payment by November 18, be struck off. Architects resident overseas will be allowed till January 1 next.

A number of firms were successfully prosecuted for wrongly holding themselves out to be architects.

In view of a letter received from an unsuccessful candidate for election as a representative of the "Unattached" architects, containing various points of criticism of the present procedure under the Regulation for carrying out this election, Mr. Gordon Jackson undertook to circulate the text to all "unattached" architects for consideration, the matter then to be considered by the Committee.

View of roof looking East, on day after the fire of 1946.

ST. MARY THE VIRGIN, OXFORD
NEW CHANCEL ROOF IN CONCRETE

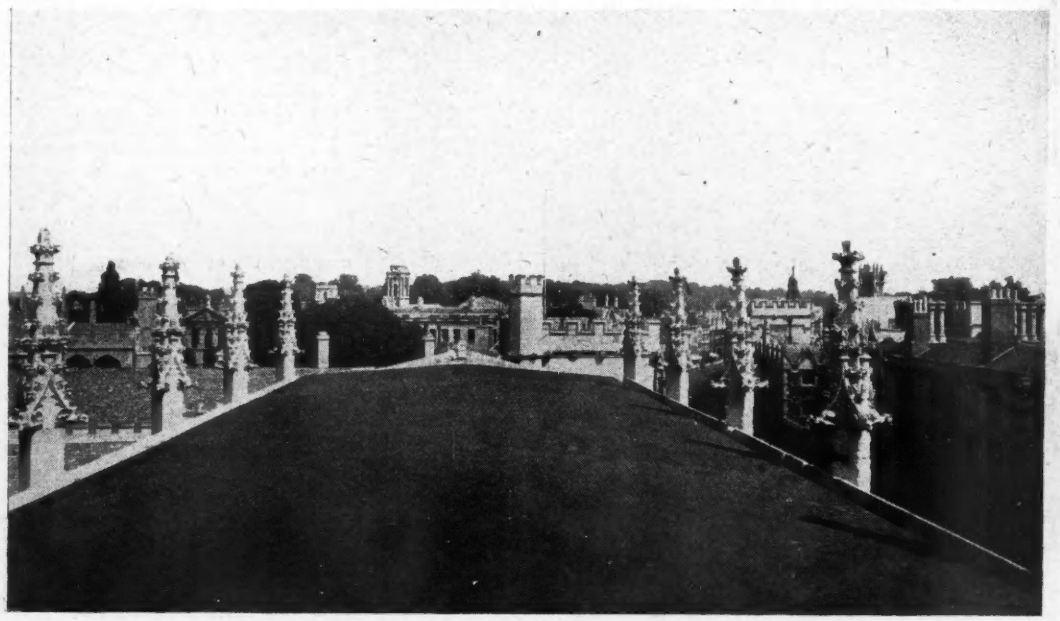
R. FIELDING DODD, BEST AND STEVENS, ARCHITECTS

THE UNIVERSITY AND PARISH CHURCH of St. Mary the Virgin in High-street, Oxford, is the fourth of the churches to stand on this site, one being mentioned in Domesday Book. The Norman Church, erected early in the twelfth century A.D., was later rebuilt, the whole of the existing structure, with the exception of the tower and spire and its continuation on either side, being of the Perpendicular period. On the late afternoon of Sunday, November 17, 1946, an electrical fault beneath the organ, which stood over the stone screen between the nave and choir, caused a devastating fire which, quickly spreading upwards through the organ, penetrated the fifteenth-century roof. Here, encouraged by a strong westerly wind, it soon spread throughout the whole length of the Chancel roof, the upper roof and organ being entirely burnt out. The roof was of double construction, a slated roof having been erected over the old oak roof last century when lead covering was removed. The prompt efforts of the Oxford Fire Brigade confined the fire to a large extent to the upper structure, and although the oak roof was badly charred most of the principal timbers escaped complete destruction.

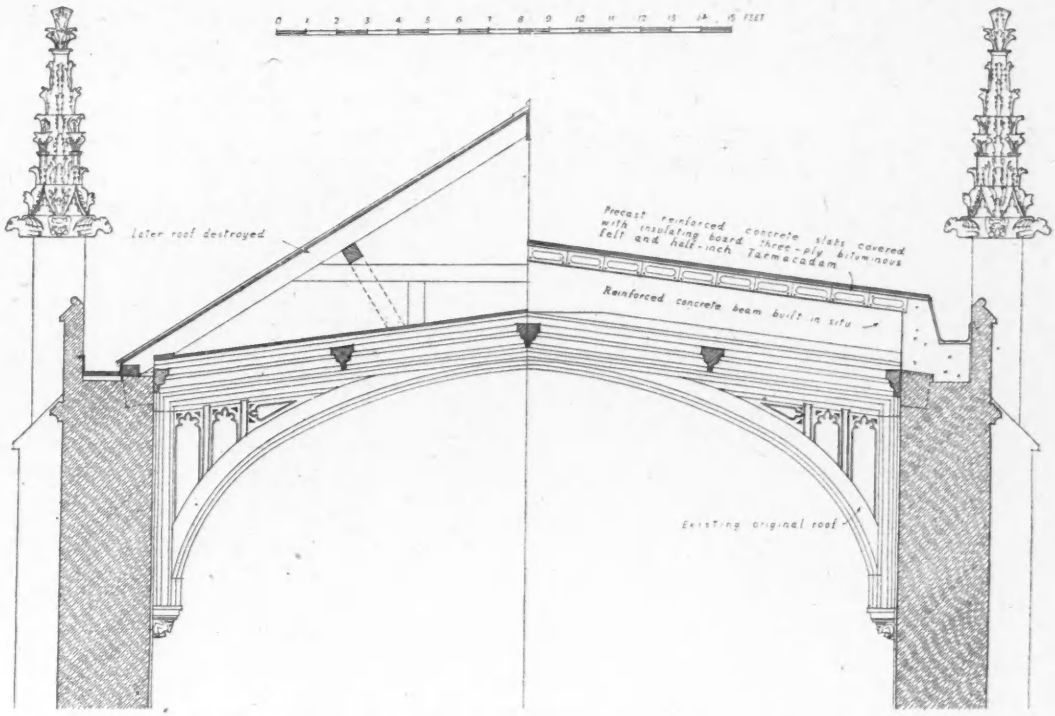
The problem of the re-roofing was a difficult one as it was obviously quite impossible to acquire sufficient timber to reinstate either the old or later roofs. It was therefore decided to depart entirely from tradition and to introduce a reinforced concrete decking over the charred remains of the fifteenth-century roof. This was designed to follow the shallow pitch of the old roof and the principal beams occurring over the buttresses were cast *in situ*, while the decking proper was precast in 12 in. wide hollow beams which were hoisted up into position from outside the church. Care was taken in placing *in situ* concrete at the bearings of principal beams to bridge the ends of oak beams and to isolate all woodwork in order that the latter might be withdrawn at some future date and to facilitate the insertion of new timbers when it becomes possible to renew the damaged work. It is intended that the new roof shall be covered later with copper sheeting, but as a temporary measure it has been sealed with three-ply bituminous felt and ½ in. tarmacadam.

A number of the leaded windows were badly damaged by heat and water; these could not be entirely replaced owing to licensing difficulties, but damaged parts have been remade.

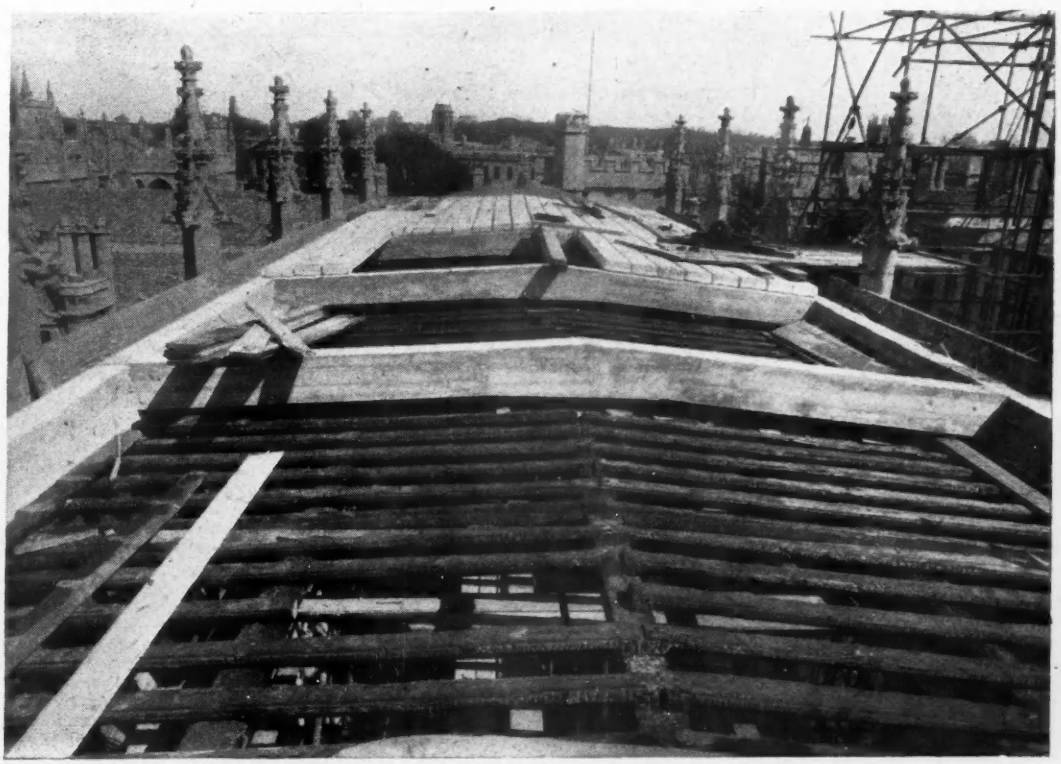
The reinforced concrete roof was designed by Considère Constructions, Ltd., and constructed by Sir Robert McAlpine and Sons, Ltd., the general contractors being Messrs. Symm and Co., Ltd., of Oxford. The precast beams were supplied by the Helical Bar and Engineering Co., Ltd. The roof covering and asphaltic gutters were laid complete by the Standard Flat Roofing Co., Ltd. The damaged leaded windows were remade and refixed by Mr. Carpenter, of Bristol.



View of restored roof as completed, looking East.

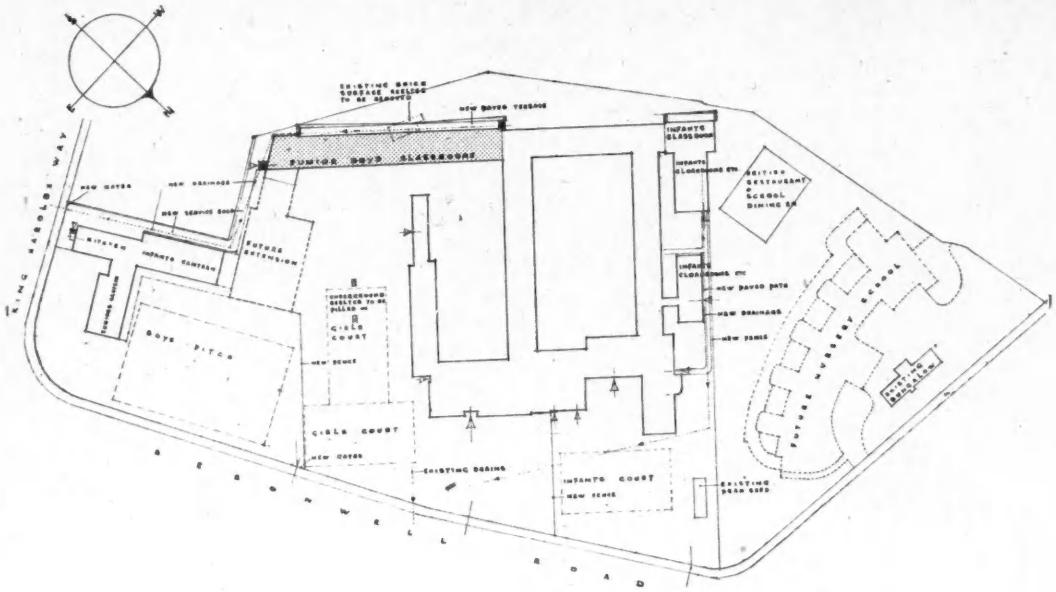

Later roof destroyed
Precast reinforced concrete slabs covered with insulating board three-ply bituminous felt and half-inch Tarmacadam
Reinforced concrete beam built in situ
Existing original roof
ROOF BEFORE FIRE
NEW ROOF

Sections through roof.

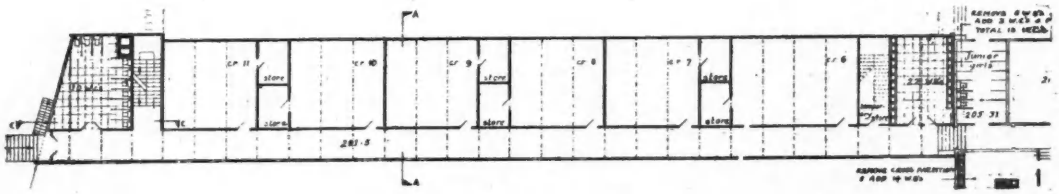


View looking East, during construction. The charred remains of the fifteenth-century roof are visible.

NEW CHANCEL ROOF IN CONCRETE FOR CHURCH OF ST. MARY THE VIRGIN, OXFORD



Site Plan. The stippled portion is the new Junior Boys' Classroom Wing.



Plan of New Junior Boys' Classroom Wing.

CLASSROOM WING AND CANTEEN

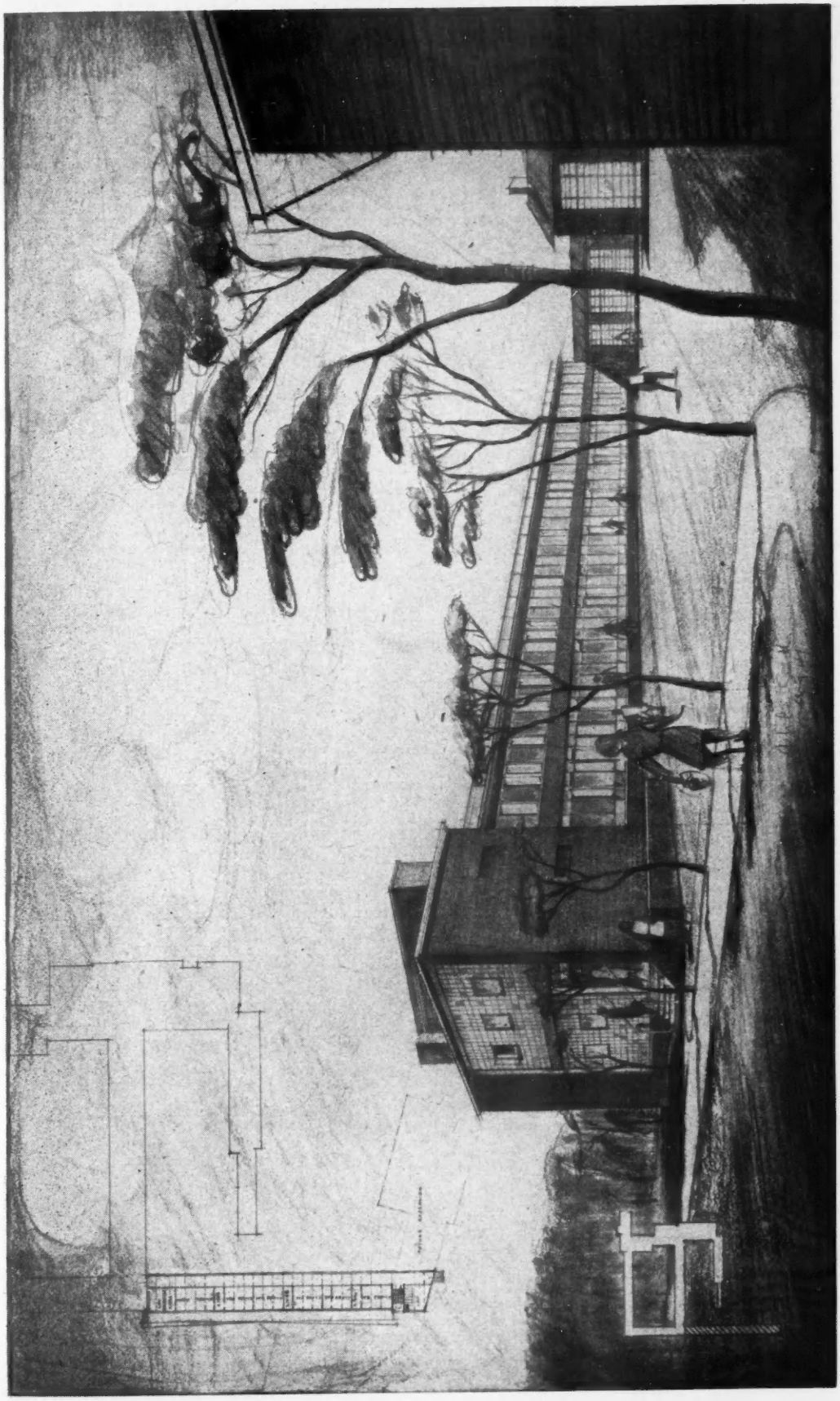
ERITH AND BEDONWELL HILL COUNTY PRIMARY SCHOOL FOR KENT EDUCATION COMMITTEE

ELIE MAYORCAS, A.R.I.B.A., A.A.Dip., ARCHITECT, IN COLLABORATION WITH S. H. LOWETH, F.S.A., F.R.I.B.A., KENT COUNTY ARCHITECT

THE EXISTING BUILDINGS AT THIS PRIMARY SCHOOL HOUSE A large junior mixed school, an infants department and also a nursery wing. The accommodation is very overcrowded and allows no room for expansion. The site, in the view of the Ministry of Education, is too small for the accommodation, and it has now been decided not to proceed with the scheme, and the designs shown on this page represented an early attempt to remodel and extend these buildings to accommodate the junior and infants into three departments (400 junior boys, 400 junior girls, and 500 infants). The nursery accommodation was to be provided in due course in a new building on an extension to the site. The proposals shown in these pages have been designed by Mr. Elie Mayorcas, A.R.I.B.A., A.A.Dip. (Hons.), in collaboration with Mr. S. H. Loweth, F.S.A., F.R.I.B.A., Kent County Architect. We are informed that a new site has been obtained and that Mr. Mayorcas has been appointed architect and will prepare designs in collaboration with the County Architect.

The total additional accommodation required would have been built in two stages. To be erected first were the ground-floor classrooms, cloakrooms, and canteen building with its kitchen. Later, additional classrooms were to be built over the junior boys' wing and a junior boys' hall added to the ground floor. The work shown would have been the first stage of this scheme.

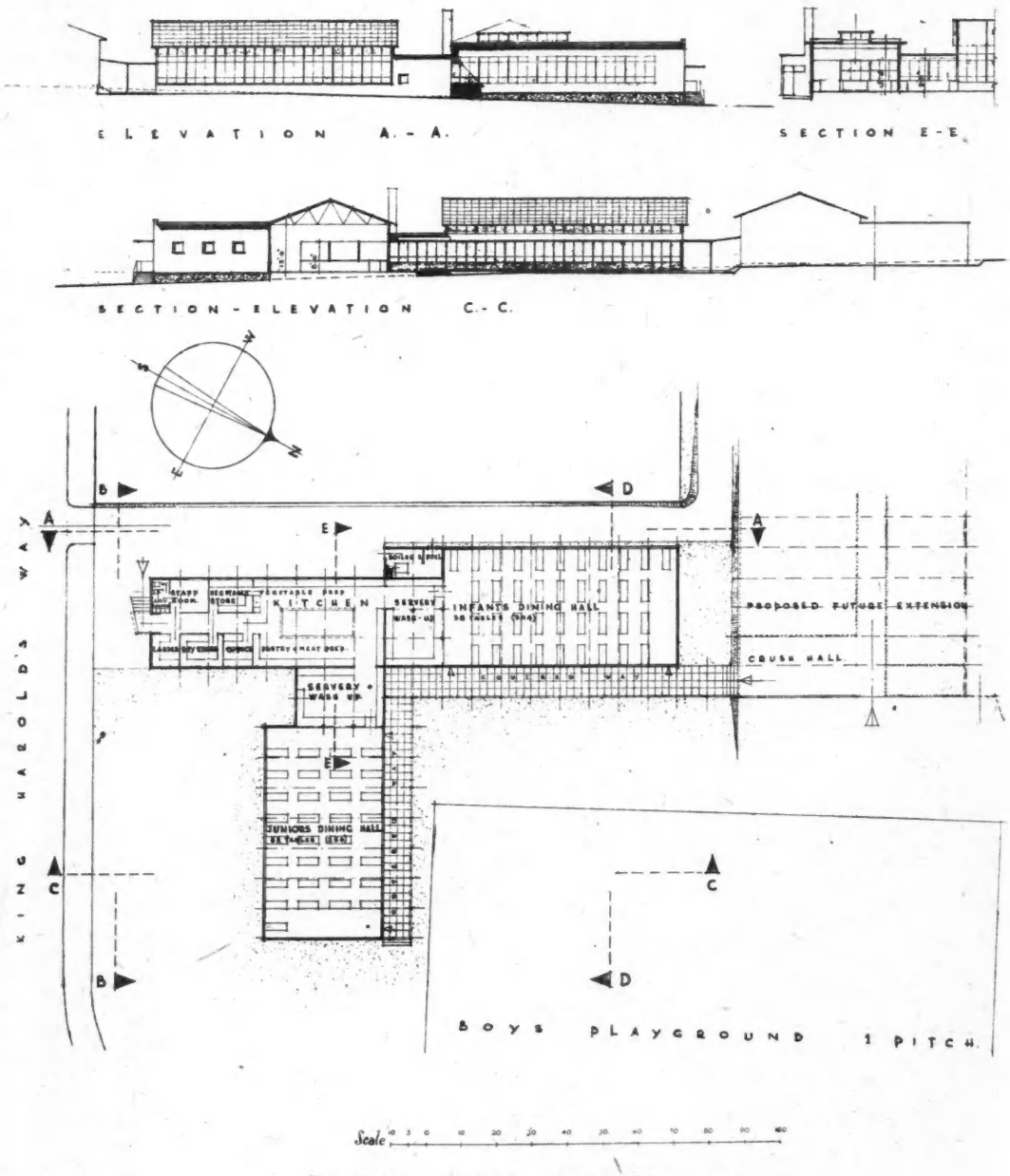
JUNIOR BOYS' CLASSROOMS: In order to allow for the increased loading, which the superimposition of the first-floor classrooms would entail, the ground-floor structure is stronger than would be required with a single-storey building, and a steel frame of medium-weight stanchions and beams is planned. This frame allows for the maximum speed in erection and flexibility in planning the upper floor. The internal walls are not load bearing. Choice of materials generally was governed by the necessity for quick delivery and rapid erection. To cut down "wet" building to a minimum, precast T-beam floors and roof, fair-face internal brickwork and fibre-board ceilings would have been used. All structural steel



CLASSROOM WING FOR JUNIOR BOYS, ERITH AND BEDONWELL HILL COUNTY PRIMARY SCHOOL, KENT

above ground level would have been left exposed and painted. Thermal insulation is taken care of by the cavity-wall construction and T-beam construction of the roof and floors, which provides a cavity between structural slab and ceiling board. External walls up to ground-floor sill are composed of inner and outer skin of brick with cavity between. Above ground-floor lintols the external cladding is of asbestos cement sheeting. In order to achieve the highest daylight factor without glare, continuous windows have been employed and placed in front of the stanchions, to which the metal frames are fixed. These stanchions are spaced at regular intervals and create a natural rhythm. To eliminate discomfort from afternoon and evening sun, lightweight metal Venetian blinds are used. Protected metal sections are used for the window boards, which are deep enough to cover wall radiators and also form a protection from hopper windows. Internally, the fair-face brick walls have a deep terracotta coloured dado, above which light sand-faced bricks are to be used.

School Canteen: The site for this building was chosen to interfere as little as possible with the existing playground. Consequently a restricted space was available for arranging the plan units. Questions of aspect and approach were further considerations. Quick access from the main school buildings in wet weather was to be achieved later by way of the junior boys' hall. The same factors that governed the choice of materials for the junior boys' classrooms applied in the case of the canteen block, namely—lightness of structure, speed of erection and readily available materials. An 8 ft. 3 in. grid is employed throughout. The dining-halls are roofed with light angle trusses as being the most economical way of spanning these areas, and further increasing the height and airiness of the halls. Over the kitchens and serveries, however, flat roofs are employed to avoid dust-collecting angles and to facilitate cleanliness. Messrs. Stinton Jones and Partners had been appointed consulting engineers for the heating and electrical services.



Plan, Elevations and Sections of School Canteen.

CLASSROOM WING AND CANTEEN, ERITH AND BEDONWELL HILL COUNTY PRIMARY SCHOOL

CORRESPONDENCE

The Repressed Profession of Architecture.

To the Editor of *The Builder*.

Sir,—As a constant reader of *The Builder* who has followed the correspondence on "The Repressed Profession of Architecture" with interest, I had been sorely tempted to enter the list in support of Mr. Abbott's letter some time back, but since I realised that any attempt on the part of the private architect to justify his existence would only provoke further snarls from other correspondents of apparently irreconcilable disposition, silence seemed to me to be the best expedient.

Mr. Swarbrick, however, writes with authority and sums up the whole case most admirably and efficiently. He earns the grateful thanks of all private architects. It is to be hoped that his letter will be widely read and productive of results which will consolidate and protect that section of the profession which has from time immemorial preferred freedom of expression and action.

N. Martin-Kaye [F.R.I.B.A.].
43, Doughty-street, W.C.1.

Lutyens Memorial Fund.

To the Editor of *The Builder*.

Sir,—The Lutyens Memorial Committee was set up in 1944 for the purpose of considering the best form a memorial to the late Sir Edwin Lutyens should take. It was decided that the most fitting, and the one which would be most welcomed by his profession, would be a comprehensive presentation of all aspects of his work in a truly worthy form.

It was decided that this important work should be presented in four volumes:—

(a) "The Life of Sir Edwin Lutyens," by Christopher Hussey (one volume).

(b) "The Architecture of Sir Edwin Lutyens," by A. S. G. Butler, with the collaboration of Christopher Hussey and George Stewart (three volumes).

For this purpose a fund was inaugurated late in 1944 known as the Lutyens Memorial Fund, as it was realised that the production of such a work, involving a great deal of patient research, was likely to demand an outlay a good deal in excess of what a publisher would require for a purely commercial undertaking; consequently the fund would need to be substantial, so as to serve as a guarantee.

A brochure has been issued giving particulars of this publication, and I should like to bring to the notice of subscribers to the fund the special conditions arranged by the committee which will benefit not only the memorial fund but purchasers of the volumes. A special discount of 25 per cent. on the published price of £26 5s. will be given to all subscribers to the memorial fund of not less than one guinea before March 31, 1948, after which date the volumes can only be obtained at the published price. All such donations will be gratefully acknowledged by the honorary treasurer, Viscount Esher, at the office of the Lutyens Memorial Committee, 13, Mansfield-street, London, W.1.

Jasper Ridley,
Chairman,
Lutyens Memorial Committee.
13, Mansfield-street, W.1.

Exhibiting Competition Designs.

To the Editor of *The Builder*.

Sir,—Your Editorial Note on October 24 on the competition for the T.U.C. building comes as a breath of fresh air to those younger members of the profession who, having risked their lives in the Forces, now prefer risking their savings in an attempt to stand on their own feet in private practice.

On one thing, however, we do insist. If we go to the trouble and expense of preparing drawings for a competition, the public must be allowed to see them. In the case of the Colombo Competition, I understand, only selections were on view, and not selections by the competitors, the other drawings being stacked. Now there is a proposal for the exhibitions to be held in relays. This latter proposal, from the point of view of the-up-to-now-unknown architect, defeats a major object of the competition. He may not expect to win, but he wishes his work to become known. And who will visit an exhibition twice?

The painter can have his work hung at any of a number of exhibitions, and if his work is too advanced for the academic hanging committee, as was the work of all the greatest painters in their younger days, he can sink his savings in a private one-man show. But the architect with advanced ideas has only the walls of the competition galleries on which to hang his work. Is this one means of expression to be denied him?

There are difficulties in accommodating exhibitions when the number of competitors is as large as it is to-day, but surely the future of the profession comes first?

T. H. B. Burrough.
25, Orchard-street, Bristol.

SCHOOL PLANNING AND CONSTRUCTION

SECOND SESSION OF R.I.B.A. CONFERENCE

The second session of the R.I.B.A. Conference on Post-War School Planning and Reconstruction took place at 66, Portland-place, on October 24, when Mr. H. S. Goodhart-Rendel, M.A.Oxon., P-P.R.I.B.A., occupied the chair.

Following is a summary of the proceedings:—

Standard and Quality of Lighting

In the course of a paper entitled "Standard and Quality of Lighting" Mr. Wm. Allen, A.R.I.B.A., said: The Building Regulations issued under the 1944 Education Act prescribe for classrooms standards of artificial lighting which are unexceptional and as such require no particular discussion at the moment, but the standard of daylighting arouses interest among designers, because it is bound to affect the design of windows, which are important elements in any vernacular of architecture.

There are two characteristics of vision which lie at the root of the matter: (1) Our eyes tend automatically to direct themselves to the brightest thing in any view and to focus on a contrast. (2) Our comfort and our ability to see are impaired by glare.

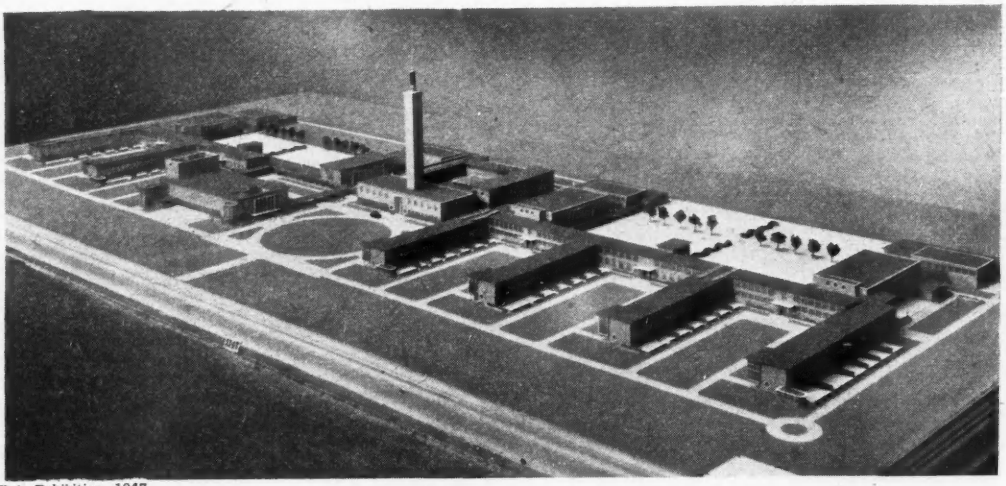
From these two characteristics we can deduce three important rules for design: (1) The object of attention should be bright and contrasty. (2) The immediate background of the object should be almost as bright as, but much less contrasty than, the object. (3) The environment should not contain brightnesses and contrasts which compete with those on the object.

When we consider the application of this group of principles to the daylighting of classrooms we find ourselves facing a problem which architecturally is outstanding. The source of light is bound to be brighter than the object on which its light falls. If, therefore, we want children to concentrate attention upon the teacher, the blackboard and the books on the desk, then the source of light itself, which is the view of sky through the window, should be reduced to a lesser importance; it should be screened in some way.

This, of course, was followed in tradi-

R.A. Exhibition, 1947. Drawn by E. J. Tharing.

SENIOR MODERN SCHOOL, BISHOPS STORTFORD. HOWARD, V. LOBB, F.R.I.B.A., ARCHITECT.



R.A. Exhibition, 1947.

MODEL OF GROUP OF THREE SECONDARY SCHOOLS AND COMMUNITY CENTRE, WALLEND, EAST HAM.

F. C. BALL, B.SC., BOROUGH ENGINEER & SURVEYOR. J. W. TAYLOR, A.R.I.B.A., CHIEF ARCHITECTURAL ASSISTANT.

tional design, for it resulted more or less automatically from deep window reveals associated with thick piers. This is not a course of action which is practicable to-day and we have, therefore, to consider how the same object is to be achieved by other methods. The most obvious of these is the use of louvres.

There is a disadvantage about louvres which at present, at least, will probably be decisive in limiting their use in this country: they are almost certain to add to the cost of the building. Let us therefore consider in detail on what basis we can modify window design to reach this objective. We will start with the window bar and work our way to the frame and surround.

If the window bars as seen from the inside present a pattern of strong dark against light, it will be found that the eyes follow the pattern of the bars, travelling over and over them again, and one will experience difficulty in focusing attention upon a view outside, no matter how attractive it is. In other words, the pattern will attract attention strongly and tend to force a focus upon it. It will be worst if the pattern is close, and is relieved as the spacing of the bars increases; it is bad if the brightness contrast is strong, and better if the contrast is weak.

Recent Trials at B.R.S.

Obviously one way of reducing the contrast effect is to reduce to a minimum the width of bar in full shadow. Preferably one should start with a thin bar, but, thick or thin, it should come to a virtual feather edge. Some recent trials at the Building Research Station have also shown that surfaces presenting an angle greater than about 40 deg. to the plane of the window received so little light that they also formed contrasts which were too strong. The aim should be in fact to have the sides of the window bar strongly illuminated. The classic ogee curve was not included in the trials, but it seems likely to be good.

Now let us consider the reveals, working from the outside edge inward. The outer edge of the reveal, like the outer edge of the window bar, is seen next to bare sky and for this reason should be as bright as possible. The modern practice of putting windows at the outer faces of the wall can be regarded as generally disadvantageous, because it means that in place of a bright external reveal there will be the shadow line of the frame next to the view of sky.

This shadow line of the frame is our next point. It should be reduced to the narrowest possible width and, of course, finished in a very light colour. It is one of the singular pleasures of fixed glazing that no frame shadow occurs.

In historical styles, both Gothic and later, the inner reveal was commonly, though, of course, not always, splayed. This, like other details, had an advantage in illumination, for there was a sort of progressive reduction in brightness from the outer edge of the reveal to the inner face of the wall. The gradual change from external brightness to the low level illumination inside made a big difference in comfort, and it is not easy to see how we are to produce similar results in the depth of the modern wall. The problem has, however, been successfully circumvented by one element in modern architectural vernacular, in which windows run the full length of the outer wall right up to the return wall across the ends.

The lintel of a window is a very special case of the reveal. Inherently it is difficult, because all the surfaces, inside and out, face downward and are therefore bound to be in shadow. The reflected light which reaches them from below is hardly enough to reduce a very aggravating contrast with the sky brightness, though it can help when fully exploited. Projecting canopies outside the window sometimes seem to help, but mainly by reducing the area of sky visible to those nearest the window.

Discussion.

Replying to questions handed up to him, the speaker said that the difficulty about the use of special diffusing glasses to avoid glare was that in order to disperse the light they picked it up and scattered it rather widely. He did not, therefore, regard their use as an aid to the reduction of glare, although sometimes with very skilful use it was possible to obtain some benefit from them.

Asked whether the problem of glare would not be largely removed by lighting from the back of the room, and whether a ceiling which sloped down to the focal wall would not also assist, while eliminating the conflict of interest between window and teacher, he said that he did not see why that should not be the case, although he thought that the teacher would suffer a disadvantage. The matter could best be studied on a model scale, and they were hoping to be able to provide facilities for large-scale model studies of illumination at the Building Research Station.

Asked whether the colours of the floor and of the desk surfaces were material factors in considering the problem of glare, he replied that in general the difficulty of the Research Station was to find a floor surface of any kind; but, looking to the distant future, probably the colour of the floor in an ordinary classroom was not as important as the colour of the desks, which must fill the greater part of the field of view. The colour of desks had been the subject of a great deal of attention in America recently, and had also received some attention in this country. Light-coloured desk-tops were more important than light-coloured floors, though the latter would be good.

Heating and Ventilation

In a paper on "Heating and Ventilation" MR. C. C. HANDISYDE, A.R.I.B.A., said:—

So far we have had three papers by experts, followed by a large number of interesting questions and comparatively little discussion. I do not claim to be an expert, and I intend to turn the tables by asking some questions from the architect's point of view. After that, Mr. Copeland Watts, who is a heating consultant, will, I hope, answer some of them, and then I hope that there will be time for people in the body of the hall to give us the benefit of their practical experience.

Last year at the Fuel Conference in this room I read a paper on domestic heating and I put a good deal of emphasis upon the question of "comfort" as opposed to mere warmth. I think the first, and probably the most important, thing to be discussed this morning is what we mean by real comfort in the heating of schools.

A reasonable control of heat loss from the body is essential. This will be obtained partly by convection, partly by evaporation and partly by radiation. The first two of these are affected by the amount of air movement in a room and, since normally air movement is related to ventilation rate, we arrive immediately at what I believe is one of the most vexed questions in school heating—namely, how much ventilation is really required. There are four questions here which I should

like someone to answer. Within the possible range of ventilation rate in a classroom, will there be any significant difference in the spread of air-borne disease? In fact, will an increase in ventilation, within the possible limits, decrease the rate of infection by diluting it or will the additional rate of movement merely blow dust and infection about rather faster and instead of reducing infection leave us "all square" or possibly even worse off?

If the answer to the first question is that infection is unlikely to be appreciably affected by rate of air change, one can assume that the guiding factors on the amount of ventilation required would then be: (a) sufficient air change to prevent body odours becoming unpleasant, and (b) sufficient air movement to ensure an adequate feeling of freshness. I suggest that this feeling of freshness is obtainable very largely by air movement without the air itself necessarily being introduced directly from outside. It should be noted here that air movement can be obtained without having a large air change. I am not necessarily saying at the moment that it is economical to do so—that is a question for a heating engineer to answer.

My third question on ventilation is necessary in order to bring the matter down to a practical basis. How much does the rate of air change contribute to the cost of the heating system in both running cost and first cost?

My fourth question is how can the rate of air change be regulated if the normal open window method of ventilation is used? I suggest that outside laboratory experiments it is an impossibility, and is likely to remain so.

Six Air Changes per Hour.

The present Building Regulations ask for a minimum air change of six times per hour in classrooms. How are the authorities going to determine this? The regulations also ask that half the window area should be openable. This, presumably, is for summer ventilation and has nothing to do with winter conditions. Incidentally, American schools and, I believe, many Continental ones, have a very much lower air change than that to which we are accustomed. Is there any evidence that there is a higher incidence of air-borne disease in such schools or that comfort conditions are any better or worse?

I should like to return to the question of comfort as it is affected by the method of heating. There are numerous methods which might be used, hot-water radiators and pipes being by far the most common. Are these really adequate from the point of view of comfort? A number of adventurous people have tried out other methods. Panel heating in floors or ceilings has been installed; high, or medium-high, temperature radiant heating by electric fires or panels, sometimes at high level and sometimes at low level, was tried in a number of schools before the war.

If floor panels are considered, several questions arise. Perhaps one of the most important is the maximum permissible floor surface temperature.

Insulation.

If floor panel heating is used, the obvious system for ground-floor rooms would be copper tubes embedded in the surface concrete. Curiously, however, a number of schemes in this country use a suspended floor, with pipes warming air which in turn warms the floor. Could we be told why this method is used? Could we also be given any data which members may have on the probable cost of these two systems?

Another aspect of heating is the control of heat loss from the structure by adequate insulation. A good deal of attention has been paid to the better insulation of houses, and some of the new methods of construction have included good insulation in the walls. In many classrooms so much of the wall is glazed that I question whether it is worth worrying very much about the remaining small area. This holds good for the series type of plan. If you have the "elbow axis" type with three or four external walls there is a large area of wall which needs attention. The windows are a big source of loss by transmission, quite apart from loss by excessive ventilation. I cannot see any hope of improving this situation until a reasonably cheap form of double-glass unit is marketed in this country; the double window is too clumsy and expensive. If ever this does happen, not only will heat loss be greatly reduced but comfort should also be appreciably better. Meantime we might concentrate more on floor and ceiling losses.

Some Answers.

MR. COPELAND WATTS said under the 1944 Act, Statutory Rules and Orders had laid down the temperature and air changes required in schools. The requirements varied according to the use to which the room was to be put, but the teaching rooms required a temperature of 62 deg. F. with six air changes an hour with 32 deg. F. outside, while elsewhere the temperature varied from 55 to 65 deg. F., according to the use of the room, generally with three air changes.

Six air changes meant a great deal of air to warm, but he understood that it was the intention of the Ministry that the metabolic heat should be taken into account when designing the heating installation. He had had an opportunity of discussing the matter with the Ministry's architect, and it appeared that six air changes were required only when the room was fully occupied, so that if the metabolic heat of the occupants was taken into account the air required to be warmed was only three to three and a half changes per hour in the teaching rooms, when schools were built to the minimum requirements of the regulations. As the regulations were not at all clear, he understood from the Ministry's architect that they were being revised to clarify the position, and that the air changes to be warmed would be stated to be three in classrooms and between one and a half and three for other types of room.

There was at present a proviso in the regulations that when the outside temperature fell below 32 deg. F., the air temperature specified for the various types of room should not fall more than 5 deg. below that specified. The designer should, however, allow a reasonable margin on the boiler plant to meet such conditions.

He had checked up the effect of ventilation on the running costs and first cost of heating installations in some recent buildings. Where the installation was designed for 62 deg. F. inside with 32 deg. F. outside, and three air changes an hour, by reducing the air changes by one throughout the school a saving of about 15 per cent. in capital cost would result, and there should be a fuel saving of about the same amount, 15 per cent.

As Mr. Handisyde pointed out, accurate control of ventilation by means of window openings was impossible. The only way to control air change within reasonable limits was to employ a balanced system of mechanical ventilation, but this would mean very considerable additional capital cost, and in practice it did not appear to be justified.

On the question of which form of heating would best give comfort conditions, he thought that provided the scheme was properly designed there was no reason why any of the alternatives available should not give satisfactory results. He suggested, however, that to attempt to warm by warm air only, without some direct heating surface adjacent to the windows to make good the very high radiation loss through the windows, would not give satisfactory comfort conditions, so that where warm air was being employed he always liked to provide some direct heating surface for that purpose.

Under-floor heating had been employed to a considerable extent in Derbyshire, and the results seemed to be very satisfactory.

Modern practice was to limit the floor temperature to 75 deg. F, and this is attained only during the coldest weather, so that for the greater part of the year the floor temperature was below that figure.

When floor heating was provided, the question of floor finish must receive careful attention. Certain compositions had been found satisfactory, but their appearance was not always acceptable. Hardwood blocks or strip flooring on concrete was also satisfactory so long as well-seasoned wood was employed.

The total saving of fuel due to insulation might be less in a school than in an office building, but there would nevertheless be a saving. He had compared the heat losses in a number of schools, and found that generally 30-40 per cent. of the total heat loss was due to air change, and that the loss from the structure was 40-45 per cent. It would be seen, therefore, that if the structure could be insulated so as to reduce that loss by half, a saving in the fuel bill of 20-25 per cent. would result. It was usually found that the saving in the capital cost of the heating installation went a long way towards paying for the insulation of the structure.

Acoustics

At the afternoon session, MR. HOPE BAGENAL, D.C.M., F.R.I.B.A., speaking on "Acoustics," said: In order of importance planning against noise comes first. Whether we consider traffic from without, or establishment noise from within, prevention is better than cure, and planning can often save expensive "sound proofing."

As to traffic noise, the new schools are generally to be on open sites, and it is a pleasure to see them thus on the new plans. In the replanning of schools on blitzed areas, where there may be a relatively noisy side, we must note that traffic on a hill is specially noisy; that a new school may mean a new bus stop; that buses are at their noisiest just past the stop where they change gears—that does not apply to Birmingham buses!—and that a cross-roads tends to be noisy owing to motor horns. Therefore, choice of site is the first thing. In some cases the urban school, like other urban buildings, must "go cloistral," turn its back on the street, put cloakrooms, lavatories, stores, corridors, gymnasium, swimming bath, workrooms, dining-room, kitchen, lifts, on the noisy side, and the classrooms, headmaster's room, administration, school hall, common rooms, medical inspection, on the quiet side. If part of the site should come opposite a recessed building or town garden, it may be found quieter than the normal traffic level elsewhere. This means that there are situations in which the older cloister plan with windows on one side only may be the best.

The greatest noise menace comes from aeroplanes, which shake roof structure and can easily set a whole building in vibration. Since some new schools are less than 35 ft. in height, they will be per-

mitted, without notification, just up to the two-mile radius limit from an aerodrome. But this means that if they are near to the principal runway they may find airliners less than 1,000 ft., laterally, above them with engines developing full power, still climbing. The point here is to note carefully the lines of the principal runways, and keep down wind.

Playground Noise.

The noise of children playing heads the list of percentage complaint for exterior noise in the War Time Social Survey "Sound in Dwellings," edited by Dennis Chapman. In regard to school playgrounds, the noise is loud at certain periods and then suddenly stops. A paved area increases noise. It is high in pitch, which means it is more easily shaded. In suburban areas, where there is some space, planting can help but cannot be called a solution. Where the school is on a noisy site it is better to have the paved playground on the street rather than on the quiet side where the traffic background is reduced by the school buildings. Everything depends on the background noise and relative nearness of dwellings.

In planning against establishment noises we have to consider the sources and also consider who it is that needs some extra defence. We are generally agreed on the noise sources—corridors, gymnasium, wood and metal-working rooms, machine shops, hall when used for concerts and theatricals, and then rehearsals, theatrical workshop, music practice rooms. Special defence in my view includes first the headmaster, who has often a very noisy corridor or concourse just outside his door and people dashing in and out. He needs a quiet lobby interposed and a real door (*i.e.*, a stout joinery door stopping tight and able to give privacy). The medical inspection room needs special defence and will not go well under an art room or geography room where people are moving about. Music teaching rooms, as distinguished from practice rooms, require special defence: they should be separate from practice rooms. In teaching music (just as in reading scores in a music library) it is particularly distracting to have alien themes coming through the walls; whereas in a practice room the occupant raises his own background and energetically drowns out his neighbours. Those two cases—teaching room and practice room—illustrate in the limits the potency of background noise as a factor. In practice, if two teaching rooms adjoin a row of practice rooms, a lobby or store with baffle doors should separate thoroughly; also teaching rooms should be somewhat larger. Good planning, therefore, to segregate the sources, and defend those who are vulnerable, is the object.

Corridors and concourses and halls are often very noisy indeed, and this should be recognised. Here a technical point enters—namely, the floor finish. The quieter are cork carpeting or rubber carpeting on the solid, or wood block; the noisiest is board and batten. If board and batten is given a hard magnesite shell it is even noisier. Almost any solid floor is quieter under-foot than a hollow floor. (This does not refer to transmission downwards, but only to noise in the room of origin.) If rubber or cork is laid on a hollow floor it becomes noticeably noisier. If tiles are bedded on a relatively thin membrane, or are pat bedded, they become noisier. There are available to-day asphalt types, and the wood-flour and cement type (Granwood blocks). Both these are quieter under-foot, in my opinion, than cement screeding, than terrazzo types, or than magnesite on the solid. But we must eventually insist on gangway strips of the cement-rubber latex type for schools, hospitals, flats; it would greatly reduce our noise problems.

In schools, as in hospitals, where a noisy corridor exists, to have fanlights opening into it is asking for trouble. Baffle doors in corridors to cut off noisy sections should be much more used.

Discussion.

Asked whether he considered that the modern excessive use of hard wall plasters, instead of the more traditional lime plaster, increased the problem of internal sound, MR. BAGENAL said it was difficult to say whether hard gypsum wall plasters were worse than lime plasters; if they were given a coat of distemper there would be hardly any difference between them. He often found, however, general acoustic disability connected with very hard gypsum plasters.

Asked what type of plaster he would advise for half brick walls plastered between classrooms, having in mind the need for a tough dado, he said that he did not think that it mattered; if one had a sound-absorbent ceiling one could put what one liked on the walls. It was possible that a 4½-in. sand-lime brick unplastered would give sufficient sound insulation.

Commenting on the effect of various shapes of roof from the acoustic point of view, he said that the barrel vault was very bad. With regard to pitched light steel trusses, with a long, low hall, the trusses could get in the way if they were very deep, but light steel trusses could be exposed and did not make much difference. A flat ceiling was generally the safest and the best.

Asked what was a good average reverberation time for the many activities of the school hall, he said that in view of the fact that the hall was used for almost every conceivable purpose, it was impossible to give an optimum reverberation figure, and the cube per seat would vary enormously, so that an average figure for a school hall half-full of about 1½ sec. by the Sabine formula was desirable, and at any rate less than 1½ sec. The volume per person must be bigger per seat than in the case of a theatre, but if a hall could be made more like a theatre, with a bigger gallery, it should be possible to bring the cube per seat down. It was necessary to avoid bringing the ceiling too far down and making a sort of long, tunnel-shaped hall, which was not satisfactory. To put in a common-sense amount of sound absorbent was the right answer.

"Use of Materials"

MR. R. FITZMAURICE, B.Sc.(Eng.), M.Inst.C.E., Hon. A.R.I.B.A., author of a paper on "Use of Materials," said: The materials to be used in school buildings must be sufficiently durable and they must possess the physical and chemical attributes necessary to comply with the accepted standards of comfort and convenience. They should also make the least possible demand on the national effort and should call for the minimum amount practicable of scarce materials needing difficult foreign currencies. Thanks to intensive study at the Building Research Station there is enough knowledge of the requirements and of the properties of materials to enable the designer to choose his materials without any great difficulty.

For roofs and floors there are some data for total man-hours in site and factory and also for the coal requirement.

For floors and roofs it is natural that the lowest coal requirement will always be associated with the structures of timber. Unfortunately, timber is becoming increasingly a scarce commodity and there is no expectation of any early improvement in this position. Steel is a heavy coal user, needing roughly two tons of coal to make one ton of steel, so that it is not surprising to find that reinforced concrete structures tend to be the most economical where coal and timber usage is concerned.

The still greater material economies latent in pre-stressed reinforced concrete have to be developed, for here it would seem is a potential coal and timber-saver of the highest order. The problem will be to reduce the labour requirements to practical limits, and this will essentially be a production problem.

Beginnings of Mechanisation.

To-day we see the beginnings of the mechanisation of manufacture of building components in such things as ready-made joinery, metal windows and certain articles of equipment. In some of the new methods of construction for permanent houses we have examples of components for the main shell made accurately by mechanised processes which go together swiftly and easily on the site.

There is no reason why such processes should not be used for the manufacture of structural components for schools, provided always that the multitude of authorities will put their heads together in order to create a sufficient market over which the costs of mechanisation can be spread. If only a few schools are wanted, it is clearly impossible to do much in this direction. If the programme is a large one, it is difficult to escape the conclusion that great economies in effort and cost are possible.

It is my opinion that major economies in man-power will come only as the result of the wider use of the machine and the manufacture of "tailor-made" components to high standards of dimensional accuracy. I believe that in a very short time it should be possible to double the output of building for a given amount of human effort, and in experiments carried out by the Ministry of Works on new methods of housing there is proof of this.

Discussion.

In the course of the discussion which followed, MR. D. L. MEDD, A.R.I.B.A., expressed his strong belief in everything that Mr. Fitzmaurice had said. It affected, he remarked, every architect who was designing schools. In the Architect's Department of the Hertfordshire County Council they had been engaged on the problem of trying to build schools in present-day conditions, and, having made a very rapid analysis of the position regarding labour and materials, they seemed to have arrived at the conclusions which Mr. Fitzmaurice had put forward in his lecture. The architect was faced with a building industry in which skilled labour was becoming more and more difficult to get, and with a shortage of the materials which were usually dealt with by site labour, and was more and more being forced to the factory to obtain the component parts with which to build. It was probably an inevitable social tendency that skilled men would wish to give up dirty jobs and to work in factories, and therefore architects would have to organise their work in new ways to cope with those conditions.

*** The first day's Sessions were reported in our last issue.—ED.

St. Mary's College, Durham.

STAVERTON BUILDERS, LTD., who were given as contractors for St. Mary's College, Durham University (illustrated in our last issue), are, in fact, carrying out work at the Univesity of the South West, Exeter, also for Mr. E. Vincent Harris, R.A. The builders for St. Mary's College are Messrs. John Jackson & Sons, 72, Corporation-street, Newcastle-on-Tyne.

"QUALITY IN ARCHITECTURE"

DISCUSSION ON MR. HOWARD ROBERTSON'S A.A. PAPER

THE Architectural Association opened its session for 1947/48 with an address by its President, Mr. Howard Robertson, F.R.I.B.A., whose subject was "Quality in Architecture." The paper was given in full in our last issue.

The meeting was held at 36, Bedford-square, W.C.1, on October 29. The preliminary business included nine elections to full membership and seven to probationary membership besides 33 nominations for full membership, 126 nominations for probationary membership and seven reinstatements.

MR. R. E. ENTHOVEN (Vice-President of the Association) was in the chair.

MR. HENRY BRADDOCK said he and others had listened to Mr. Howard Robertson for 25 years, and all present were very much aware of the happy circumstances which made Mr. Robertson President in the A.A.'s 100th year. He was a distinguished architect in this country, and a kind of ambassador of architecture abroad. Recently he had been to America representing this country and architecture. He was also an educationist, whose ideas and practice had had and would continue to have a profound effect on the Association's school. He had made its students realise that the future of the school lay in the study of current affairs, current problems and a contemporary type of expression. Whenever he spoke he was never afraid to bring his audience back to essentials. Architects to-day floundered about, hindered by restrictions and trying to serve administrative bodies whose minds inevitably changed from time to time; but in the midst of all that Mr. Robertson came forward and put down the word quality, throwing in as makeweight the words harmony and order. He had referred to personality, and if we were to have an architecture of any worth at all it must be put into the hands of the individual architect; the idea was untenable that it could be achieved by the collection of scientific knowledge in the form of technical research, and dealing with buildings by a kind of limited control method. The idea of group working being a virtue was emphasised too much, and this was a great danger. Because the clientele had changed from individual to community was no excuse for a dull uniformity of expression of that fact: if the idea that the community was to be the basis of our social life succeeded, then the idea of the community must be the inspiration of the individual. Standardised and mass-produced buildings, although carefully and faithfully designed, unless they had the quality to produce a proper environment would be purely dull. It was essential that these units must receive that aid from the architect in placing them on to sites.

MR. HENRY BERRY said that in 1847 Europe had been boiling up for 1848, the year of revolutions; but in this country the year 1847 had given birth to many movements and organisations that had been a credit to the country. The A.A. had had a wonderful influence. Mr. Howard Robertson's address had first depressed the audience and then lifted up their hearts: he (Mr. Berry) agreed with the latter part of the lecture. Out of the present *via dolorosa* would come a new field. When Mr. Robertson had been speaking of foreign travel, he (Mr. Berry), had thought of old Continental town halls as an expression of the pride that people of old took in their city: he was a great believer in civic pride being shown in the housing of civic authorities; but he was not a blind believer in Continental practice. The Stockholm town hall owed a great deal to its being sited on the shores of Lake Mälaren, but he had seen an attempted copy in this country placed amid squalid surroundings. Those surroundings must be cleared up if the full value of the work was to be shown. Every age of travail in the history of the world had had its influence on architecture, not always adverse; and there was no reason why the twentieth century should not produce a high quality architecture of its own.

MR. GORDON BROWN said that in the ordinary complicated scientific business of designing aircraft the best engineers approached their problem from the point of their feeling about it. Mathematics came afterwards. So with the enormous complications of architecture to-day. On the more detailed side one of the things which gave quality was fine detail. He disagreed with the speaker who said that craftsman and architect could be divorced. Craftsmanship had started to decline before the architect had lost his real mastery of it, and in a time of confusion hundreds of drawings had been produced by the architect to guide the craftsman. To-day the architect still produced innumerable drawings, but very few people know much about craftsmanship. One of the things that could be done was to provide some sort of place where an architect could have a detail modelled up quickly so that, if necessary, he could change it. Only so could we get back to detail which would produce good quality. Should architects engage in industrial design or not? So many of the components of buildings were produced by industry that unless architects intended to become mere assemblers of components, they must take part in industrial design.

Training for Industrial Design.

Mr. R. F. JORDAN said that during the next five or ten years the Association would turn out one hundred people intending to practise architecture as a profession, and what were those people going to do? Buildings would be carried on for statutory bodies, and buildings would be designed here to be erected abroad, but architecture as a fine art would not exist here for the next ten years. But the A.A. could not abdicate its function of training fine designers. It should train its students for industrial design. After the Napoleonic wars this country had recovered because of coal and iron, and had become the workshop of the world. We could only again become the workshop of the world by being really fine designers, showing the world what quality of design should be, and that it came from England.

MR. F. R. YERBURY said that Mr. Robertson had not defined what quality in architecture was: It was something you could not define.

MR. HUGH CASSON said he had never tried group practice, but he did not think it was necessarily a failure. You could have personality emerging from buildings that had been produced by a group. St. Peter's at Florence and St. Peter's at Rome had each of them taken up to one hundred years to build, and had occupied from twenty to thirty architects, all with tremendously strong personalities.

MR. P. SMALLWOOD (President of the London Master Builders' Association) said he could appreciate quality of design although he did not know the finer points of it. He could not see architects being able to get the necessities of life if quality was to be the only staff on which to lean in present circumstances. He thought the speaker who suggested that architects might supply design in industry was suggesting something which was practical at the present time.

MR. T. E. SCOTT said he represented one of the lesser London architectural schools. There were few schools throughout the country in which staff and students had not learned to recognise Mr. Howard Robertson as a great authority on architectural education. Listening to the lecture he had come to the conclusion that quality in architecture was something which architects could only achieve when they realised that they were not seeking their own glorification, but seeking to work as members of a team. Some time ago, acting as examiner in a school, he had interviewed a student who had submitted a design for a school of building crafts. The problem was properly conceived as that of an educational institution, and included workshops for the training of joiners, masons and so on; but no traditional materials were used in the building. It was constructed almost entirely of materials such as were illustrated in manufacturers' catalogues.

MR. PETER HARLAND said that before the war architects considered the essentials of architecture to be fine planning, which must naturally produce a fine mass elevation to embryo. They thought a first essential was good material. Decoration was treated as a thing apart. Sculpture, for instance, was placed on a building which warranted it, and where it could be seen and admired. So also with wall paintings in the interior. Before the war quality meant more than it did now, and the judicious use of fine materials gave a chance to sculptor, painter and craftsman.

MR. GREY WORNUM thought Mr. Howard Robertson had not paid the tribute that was due to the younger generation. He had suggested that wide culture, travel and so on were necessary if quality was to be produced in architecture; but in recent visits to the school he (Mr. Grey Wornum) had seen immense quality in some of the students' designs. Where they fell down was when they were asked for some detail about the materials in which the designs were to be carried out. In a library for the Middle Temple a good design had been submitted. Asked what material was to be used, the student had replied: "Artificial stone." When further asked: "Why not real stone?" the student seemed to think there was no difference between the two materials.

Mr. P. I. GORDON thought architects should interest themselves in industrial design: they should interest themselves in all the manufactured goods which went to make up a building. He believed this was considered normal abroad.

MR. LESLIE WATSON said that before the war quality in architecture was taken for granted, but now it was completely swept away. It was essential that architects should all try to do good work and be given the opportunity to do it. But buildings were designed to a standard in order to save time and to cope with too much work: those standards were taken all over the country and merely adapted and pushed into shape to suit awkward sites. Before the war the student had gone into an office for experience where probably he was not paid, but now he went into a public office. He was paid, but there was a danger that he might take the things he saw there as normal, whereas they were really below par.

HOUSING PROGRAMME, 1947-48

MEASURES TO EXPEDITE PROGRESS

THE following statement in regard to the housing programme was made on behalf of the Government in the course of the Debate on the Address in the House of Commons on October 23 :—

" The situation of the housing programme is that 260,000 permanent houses are now in course of construction, and 90,000 more are under contract. The Government have decided to provide for the completion of all these houses, and for their completion in the shortest possible time. The timber necessary to complete many of these houses is already in hand; 80,000 are, in fact, already roofed, and we can expect, therefore, to finish more houses in 1948 than will be finished in 1947. This will be possible because of the large number of houses in the course of erection. There is a store which the hard work of the Health Ministers has accumulated and which can now be put to good purpose in enabling us to finish more than would otherwise have been possible.

" Timber, as is known, comes largely from dollar countries, and it has been necessary to restrict the amount of timber which can be imported during 1948. Approvals of new houses during the remainder of this year, and during next year, will proceed on the basis that the number of houses which can be completed in 1949 may not be more than 140,000, and a balanced programme as between houses under construction and houses completed will be achieved by the middle of 1949. This means that, on the basis of foreseeable timber supplies, there will be about 140,000 houses under construction by the middle of 1949. If, of course, we were to succeed in importing timber from non-dollar sources, we might increase that number and improve on that programme. The whole situation will be reviewed again in the early summer of next year in the light of actual facts, and particularly of the timber position as then seen."

M.O.H. Circular 160/47.

In a Circular issued by the Ministry of Health, fuller details are given for the guidance of local authorities of the arrangements outlined above in relation to operations until June, 1948, when the whole position will be reviewed again. The Circular states :—

In the first place, there must be emphasised the major importance of completing as rapidly as possible those houses in contracts on which an effective start has already been made. The number of local authority houses which have already reached advanced stages of construction has substantially increased in recent months. At the end of September in England and Wales 71,170 houses had been roofed and of these 31,603 houses had been plastered. It should, therefore, be feasible to maintain a high rate of completions.

Actions taken by the Ministry to expedite completions are set out in the appended memorandum. The immediate attention of local authorities is drawn to the suggestions made in the memorandum as to the actions they themselves should take with the same object. In particular, all possible steps should be taken to finish quickly minor works which prevent houses from being occupied.

The restriction in the imports of timber in 1948 should not affect the number of houses which can be built in that year since in respect of a large proportion of the houses now under contract the timber has either already been provided or is in the hands of the merchants.

The next major step to be taken is to get the programme into balance. The rate at which houses have been completed has been reduced by the dispersion of the available building resources over too many houses at the same time. As a result, individual houses have taken, and are still taking, too long to complete. The number of houses under construction must, therefore, be reduced, and in the interests of completing rapidly the houses now building and of achieving balance in the programme, the number of fresh contracts let must be strictly controlled.

This object will be secured by relating the approval of new tenders to the building resources available, and local authorities are reminded that they must secure approval through the Principal Housing Officer before they invite tenders. The distribution of new contracts amongst various authorities will be determined after an examination of the actual progress made in existing contracts and with due regard to the need for giving priority to houses for coal miners, members of the agricultural population and key workers in Development Areas. The number of houses so allocated and the arrangements for the timing of new tenders will be settled in consultation with individual local authorities. Most local authorities have enough work on hand to keep them busy for the next year at least. Local authorities should defer submitting tenders for approval or seeking sanction to proceed to fresh tender until the available labour force is distributed efficiently over the houses already approved.

Attention is drawn to the following points :—

(1) The permanent aluminium houses and the Airey rural houses represent additional provision for coal miners, key workers and agricultural workers in accordance with the announced policy of giving priority to houses to be built for these workers.

(2) Allocations of other houses to mining and agricultural workers and key workers will be dependent on the availability of building resources and on an undertaking by the local authority that a substantial number of the houses will be let to such workers : the precise proportion will be determined in each case with due regard to local circumstances.

The arrangements which have been authorised by the Government for the continued development of the housing programme are intended to promote speedy completion and occupation of houses and to mark the Government's sense of the need for continuity. The Minister is confident that local authorities will appreciate these considerations and will give the fullest support to all measures which will increase the supply of completed houses in the quickest possible way.

SUGGESTIONS TO SPEED CONTRACTS

The following memorandum on measures to expedite completions of houses now under contract is issued with the abovementioned Circular :—

1. The measures described below and the suggestions made are designed to speed up the completion of houses in local authority contracts. They depend for their success on co-operation between the department, local authorities, contractors and operatives. Some of them may be familiar to local authorities or may have been dealt with in previous Circulars (see list appended), but now merit fresh emphasis. Some may touch on points of difficulty which must be handled with tact and discretion.

2. As a first step, local authorities should review their existing contracts, ascertain causes of delay and probe them thoroughly. Where the progress made is not calculated to enable completion within a reasonable time, arrangements for adjustment to a reasonable level should be sought by agreement with the contractor and in consultation with the Principal Housing Officer. Contractors in such cases may be expected to agree, in the light of the experience gained, that it would be in their best interests to concentrate resources on such portion of the original contract as they can carry out. It may then be practicable to provide for the execution of other parts of the contract by other contractors or sub-contractors.

3. Local authorities should satisfy themselves that their organisation and arrangements for supervision are efficient and adequate. Even though a consultant architect may be employed, it does not relieve them of this responsibility. Particular care should be taken to see that minor works are finished which at present prevent houses from being occupied. It may be unnecessary to wait for every small item to be in place before admitting tenants.

4. The ordinary terms of contract are, perhaps, not conducive to the finishing of houses in batches. Payment to the contractor is usually in respect of 90 per cent. or so of work done and materials delivered, as the work progresses; half the 10 per cent. retention money is paid on " practical completion " and half is kept until the end of the maintenance period for the whole contract. Such arrangements tend to encourage contractors to go from house to house and finish them all together. In view of the urgency of the housing need, it is, however, essential to do all that is possible to accelerate the completion of individual houses. This object might be assisted if the local authority could see their way to pay three-quarters of the retention money on " practical completion " of individual houses or batches of houses and the balance at the end of the maintenance period in respect of these houses.

5. In some cases houses could be completed more rapidly if the contractor could secure sub-contractors in respect of the finishing trades. These sub-contractors might have to be drawn from other work, and it would assist if the contractor could be persuaded to give, out of payments made to him, interim payments to the sub-contractors for materials and work, even though this is not provided for in the contract.

6. Local authorities will be aware that the National Joint Council of the Building Industry has agreed that bonus rates systems of working shall be linked with the increase of the hourly rate of pay operative from November 16. Targets and bonus rates are to be fixed for each job by employers in consultation with the workers concerned and subject to certain safeguards. If they have not already done so, local authorities should urge upon their contractors the speedy adoption of targets and bonus rates for their housing work within the framework of the general scheme.

7. There is room also for greater development of responsible team work by the management and workers on the sites. More efficient site organisation by the management will now be of major concern to the workers. There should, therefore, be greater scope for the formation of Joint Production Committees.

8. The supply and distribution of materials and fittings sometimes present major difficulties. Steps have been taken to expand production and to develop suitable substitutes where conventional items are in short supply. Action has recently been taken to control distribution more effectively to ensure that scarce materials reach W.B.A. priority jobs. The revised W.B.A. scheme has been given statutory

sanction. The scheme is applicable to certain categories of maintenance and repair works, in addition to new building, but local authorities should exercise care in issuing certificates lest new housing be prejudiced.

9. Repairs and maintenance work often call for the use of materials and fittings which are wanted for new housing. Despite the suggestions already made on this point it is apparent that many local authorities have issued too many licences which make demands on scarce materials and components. Local authorities should, therefore, rigorously control the issue of licences for such maintenance and repair work particularly during the next few months.

10. Information from local authorities has indicated that they must take special action to avoid delays after houses have been plastered, in connection with flooring, soil pipes and rainwater goods, electrical equipment and grates.

(*a*) *Flooring.*—In Circular 79/47 reference was made to various alternatives which could suitably be adopted for the covering of ground-floor rooms in view of the shortage of timber. Experience has shown that mastic asphalt or pitch mastic flooring has been widely adopted by local authorities in the last six months and that as a result of the rapid increase in demand there is now an acute shortage of skilled labour for this kind of work. Arrangements have been made to expand the labour force engaged on this work, but this expansion can be secured only gradually.

In order to facilitate the early completion of the large number of houses for which mastic floors have already been specified, local authorities are advised during the next few months to select one of the other alternatives suggested in the Circular.

Mastic flooring cannot be laid economically in a small number of houses at one time. The specialist firms require a minimum of 12 houses before they are prepared to bring in the necessary labour. Where it is not possible to provide this number, alternative methods of flooring should be adopted forthwith.

(*b*) *Soil Pipes and Rainwater Goods.*—Cast-iron goods are scarce, and, despite every effort to increase production and introduce mechanisation, will, unfortunately, be scarce for some time. Local authorities should be more ready to accept alternatives, even though they are more expensive. The cost is justified if the houses are made occupiable so much the sooner.

(*c*) *Electrical Equipment.*—New distribution arrangements and the revised W.B.A. scheme should make the position easier in future in regard to electrical fittings of various kinds.

(*d*) *Grates.*—The total production of grates is adequate to the demands, but the current production of certain of the most modern types is not, and cannot, for some time to come, be sufficient to meet immediate demands. So far as room heating appliances are concerned, it will be necessary for local authorities to accept, without delay, alternative types of similar dimensions. Back-to-back grates, however, vary widely in dimensions and the substitution of one type for another cannot readily be made at a late stage of construction. The position regarding the supply of these appliances should be verified at an early date, before the possibility of substituting one type for another has been lost.

11. The supervision exercised by the local authority through their responsible officers should be sufficient to ensure that difficulties in obtaining essential materials and components are at once brought to notice and that directions are given for the substitution of some available alternative. In order to avoid delays, wide discretion should be given to responsible officers to accept alternatives without having to wait for Council decisions. Where no suitable alternative can be obtained by the contractor or the local authority, the difficulty should at once be reported to the Regional Progress Officer of the Department. Neither local authorities nor contractors must allow themselves to accept the idea that because particular types of components are scarce delay in the later stages of constructing houses is inevitable or natural.

APPENDIX.

List of Circulars, etc., issued since January 1, 1946, dealing with technical items affecting progress of building :—

Circular 76/46, April 10, 1946, Supply of Building Materials and Components. Supplements to 76/46, July, 1946, Baths No. 1; August, 1946, Bricks No. 2; December, 1946, Bricks No. 3; January, 1947, Building Board No. 1; June, 1947, Cement No. 1; December, 1946, Copper No. 1; August, 1946, Electrical Components No. 1; December, 1946, Electrical Components No. 2; October, 1946, Lead No. 2; August, 1946, Paint No. 1; September, 1946, Paint No. 2; July, 1946, Plasterboard No. 2; March, 1947, Plasterboard No. 3; April, 1947, Plumbers' Fittings No. 1; July, 1946, Rainwater Goods No. 1; August, 1946, Rainwater Goods No. 2; July, 1947, Rainwater Goods No. 3; July, 1946, Roofing Materials No. 1; March, 1947, Roofing Materials No. 2; June, 1947, Roofing Materials No. 3; May, 1946, Solid Fuel Grates No. 1; August, 1946, Solid Fuel Grates No. 2.

Circular 150/46, July 12, 1946, Use of standard products. Circulars 208/46 and 208A/46, November 8, 1946, and December 13, 1946, Supplies of bricks: forward ordering. Circular 8/47, January 20, 1947, Control of civil building. Circular 19/47, February 4, 1947, Methods of ensuring maximum use of small builders and specialist contractors on Housing Programme. Circular 52/47, March 19, 1947, Recommendations as to improved solid fuel heating for installation in new houses. Circular 71/47, April 11, 1947, Use of steel recovered from shelters. Circular 79/47, April 29, 1947, Floor coverings for solid ground floors; conditions under which timber may be used; schedule of alternative materials. Circular 117/47, July 2, 1947, Control of civil building; issue of licences for special types of work. Circular 132/47, July 31, 1947, Economy in use of lead. Copper tubes and cylinders for use in hot and cold water systems in building. Circular 140/47, August 25, 1947, Building materials and components. Priority distribution scheme.

HOUSING PROGRAMME IN SCOTLAND

The Secretary of State for Scotland announces in a Circular that he has decided that the following steps should be taken to bring the programme into balance :—

(*a*) *Houses under construction.*—It is not proposed to stop the building of any of the 44,000 houses at present under construction. The aim here will be, by means of increasing the rate of completion and by regulating the commencement of new houses, to reduce the total number of houses under construction to some 15,000-20,000 by the latter half of 1949. The Secretary of State will do everything in his power to secure the necessary supplies of timber and other materials to complete the houses at present under construction as quickly as possible.

(*b*) *Houses approved but not begun.*—To achieve a balance in the housing programme, and at the same time to increase the rate at which houses are to be completed and made ready for occupation, we must, states the Secretary, for the time being, postpone the commencement of traditional houses which have been approved but have not yet been begun. Local authorities are, therefore, asked to give immediate instructions to their contractors to postpone the commencement of such houses. Houses in this category will be brought into construction gradually over a substantial period, and only with the prior consent of the Secretary of State.

(*c*) *New approvals.*—No change is proposed so far as concerns the approval of new contracts. As at present, therefore, save in the most exceptional circumstances, it will be possible to approve new tenders only for houses to be occupied by agricultural workers and miners in areas where the Secretary of State is advised by the appropriate central authorities that it is necessary to do so in the interests of fuel and food production. In the main, these new approvals will take the form of specific allocations under special programmes which the Department are formulating to meet the needs of these categories for the next two or three years.

(*d*) *Temporary housing schemes.*—It is not proposed to curtail the temporary housing programme. The Secretary of State expects that this programme will be completed in the course of 1948.

(*e*) *Licences for private enterprise houses.*—The Secretary of State has considered the question of the erection of houses by licence, and has decided that as from the date of receipt of this Circular no further licences should, without the prior approval of the Department, be issued by local authorities for the erection of houses, other than houses to be built in replacement of war-damaged houses.

HOUSING PROGRESS

M.O.H. RETURN FOR SEPTEMBER

THE Housing Progress report for September* shows that the number of permanent houses completed in Great Britain during September was 14,203—the highest yet. The comparable figure for August was 11,259, and the previous highest 12,426 (in July last). 3,405 temporary houses were finished, as compared with 3,058 in August. The total of completed houses, permanent and temporary, is now 276,150, of which 51,683 have been erected by private enterprise out of a total of 149,475 permanent houses. Houses under construction are 267,100, and projected but not begun 118,237. The latter figure is 14,614 lower than at August 31.

The position as to production of materials is :—

	Sept.	*Aug.*
Cement (1,000s tons)	628	613
Plasterboard (1,000 sq. yds.) ...	3,477	3,141
Drain pipes (1,000s tons) ...	46.3	37.7
Bricks (millions)	438	371
Plaster Gypseous (1,000s tons)	15.9	15.4

Housing Labour Force.

The total labour force employed on the construction or repair of houses in Great Britain fell from 556,300 to 552,600. There were 257,000 men engaged on the construction of permanent houses and preparation of housing sites, as compared with 255,600 at the end of August, and 11,300 on temporary houses (August, 11,400).

OFFICIAL NOTIFICATIONS

Import of Rough Marble Restricted.

From November 4, 1947, individual import licences will be required for the import of marble, rough or rough sawn, but not further prepared, consigned from Belgium, France and Italy. Import has hitherto been unrestricted. The Board of Trade point out that licences will not be granted for the import of carborundum sawn marble.

Electric Cookers.

Attention is drawn to the fact that all-aluminium electric cookers have been produced, and can be obtained under the blanket order arrangements. Although these cookers differ in appearance from the standard type to which housewives are accustomed, the Ministry of Health states that local authorities should not be deterred on that account from accepting them. It is expected, moreover, that aluminium cookers with a vitreous enamelled hob will be available in the near future.

* Cmd. 7242 (England) and 7243 (Scotland). Price 10d. and 4d., post free, respectively, from H.M. Stationery Offices.

IN PARLIAMENT

The Housing Programme.

MR. MARPLES asked the Minister of Health what modifications in the housing programme he proposed to make; and if he would make a full statement.

SIR WALDRON SMITHERS asked the Minister whether his new regulations to stop all new house building applied to the Stevenage satellite town.

MR. BEVAN referred his questioners to the statement made by the Minister of Economic Affairs (Sir S. Cripps) on October 23, and to the circular which had just been sent to local authorities. [See page 522.]

MR. MARPLES: Does the Minister realise that when building recommences it will be necessary to have a nucleus of trained workers, and unless a very much more comprehensive statement can be given to the public and to the trade, there will simply not be a building industry to be called upon?

MR. BEVAN: The hon. gentleman has not yet seen the circular to which I have referred, and I would advise a study of it before he reaches any conclusion. There are 350,000 houses already under construction and under contract and that will be sufficient to keep the building industry occupied for a little while to come. As he will have seen from the statement of the Minister of Economic Affairs, the whole position will be reviewed early next year.

Replying to Commander Galbraith, MR. BEVAN said that all of the 350,000 houses to which he had referred were permanent houses.

MR. DUMPLETON: Will the Minister impress on his colleagues in the Cabinet that there should be no curtailment of the housing programme whatever else may happen, because it would cause widespread resentment and injury?

MR. BEVAN: I am sure we are fully aware of that, especially as we have received endorsement from Members of the Opposition.

MR. WALKER-SMITH asked if the Minister still adhered to the view he expressed on July 28 that any reduction in the housing programme would gravely jeopardise national progress.

MR. BEVAN: At the moment, no reduction in the housing programme has taken place.

Local Authority Houses.

MR. GRANVILLE SHARP asked the Minister of Health how many houses were completed by local authorities in each of the years 1919 to 1924, inclusive; and how many working-class houses were completed by private enterprise in the same years.

MR. BEVAN said that the following were the figures: Number of houses completed in England and Wales between January 1, 1919, and December 31, 1924:—

Period.	Local Authorities.	Private Enterprise.	
		Subsidised.	Unsubsidised.
1.1.19 to 31.3.20	576	139	
Half-year ended 30.9.20	2,926	2,486	30,000 (estimated)
Year ended 30.9.21	47,651	20,294	
1922	85,976	20,189	
1923	25,241	748	52,749
1924	14,544	21,915	73,032

Subsidised.

Rural Housing.

MR. COLLINS asked the Minister of Health if he would make a statement on the methods by which the decision to give the highest priority to houses for farmworkers would be implemented, and indicate the extent to which it would be necessary to expand the housing programmes of rural authorities.

MR. BEVAN, in reply, referred to the circular already issued. No specific form of undertaking had been issued. Each case would be examined by his Department in the light of knowledge of the local circumstances.

MR. COLLINS: Is my right hon. friend aware that I have seen the circular to which he refers, and which will undoubtedly achieve, in due course, the desired objective; but does he not think it possible for some immediate machinery to be set up to bring the farmworker and the farmer into contact with the local authority so that immediate benefit may accrue from any houses that may now become available in the rural areas?

MR. BEVAN: I believe that when the machinery now being set up is in full operation the farmworkers will be met, but I think it is necessary for the House to realise that ancillary industries in the rural areas are almost as important to farming as the farmworker himself.

MR. R. S. HUDSON: Is the Minister aware that the terms of the circular, which most of us have probably seen, are still at variance with the promises held out by the Minister of Agriculture to the farming community, that priority of a high order will be given to the provision of houses for agricultural workers and miners?

MR. BEVAN: I cannot accept the inputation, and I am quite certain that the National Farmers' Union does not endorse it.

MR. HUDSON: Is the right hon. gentleman aware that the terms of the circular merely instruct local authorities to have regard to agricultural workers as well as other applicants? Anyone who thinks that those words are the equivalent, in the ordinary sense, of high priority, should learn the English language.

MR. BEVAN: The right hon. gentleman, as usual, misinterprets the circular. We cannot accept that all questions of need should not be taken into account when selecting tenants. What we are saying is that special consideration should be given to the needs of the agricultural community.

MR. DUMPLETON asked if the Minister would assure that a measure of discretion should still be left to local authorities to erect houses on a basis of need, and that priority for agricultural workers and miners should not be an absolute one.

MR. BEVAN: There is no absolute priority.

SIR T. DUGDALE: Was not the whole emphasis by the Minister of Agriculture on priority for rural workers' houses, and is it not a fact that what the Minister has said indicates quite clearly there is not to be a priority in houses but in selection?

MR. BEVAN: Neither the Minister of Agriculture nor any Member of the Government has ever stated that there is an absolute priority, but what has been stated is that conditions have been specially weighted in favour of the agricultural worker, for whom there are special considerations. As the hon. Member knows very well, a mechanic in rural areas attending to rural machinery is doing agricultural work just as important as that of a field worker.

Reconditioning.

MR. TURTON asked the Minister of Health whether he intended to introduce before Christmas a Bill making provision for the improvement and reconditioning of houses occupied by agricultural workers.

MR. BEVAN: No, sir.

MR. TURTON asked what had happened to the legislation that the Minister promised on July 21. Had that shared in the basic cut?

MR. BEVAN said there was no promise that legislation would be introduced this session.

SIR T. DUGDALE asked if the House was to understand from the answer that the recommendations of the Hobhouse Report had been shelved completely for this session.

MR. BEVAN: The House can understand from the King's Speech that no provision is made for legislation for the reconditioning of cottages, the view of the Government being that if there were legislation for reconditioning rural cottages, it would be at the expense of new accommodation in the rural areas. We are anxious to get the new houses built.

SIR T. DUGDALE: Does the Minister realise that either through ignorance or prejudice the provision of housing accommodation in the rural districts is being much impeded by his decision?

MR. GOOCH: Does the Minister appreciate that he will give immense pleasure in rural areas if he will concentrate labour and materials on the building of new houses rather than using it for patching up old houses, many of which are completely outworn and should be demolished?

MR. ASSHETON: Is the Minister aware that the view just expressed is not the view of those occupying cottages which should be reconditioned?

MR. BEVAN: It is, however, the view of the vast majority of agricultural workers that they would rather live in new houses than in the miserable houses you built for them!

MR. ALPASS: Is it not a fact that the very insanitary condition of these houses is due to neglect in the past on the part of the Tory landlords who owned them?

MR. HOGG: In answering questions, will the right hon. gentleman remember that Ministers of the Crown owe a duty of courtesy to all Members of Parliament, irrespective of Party?

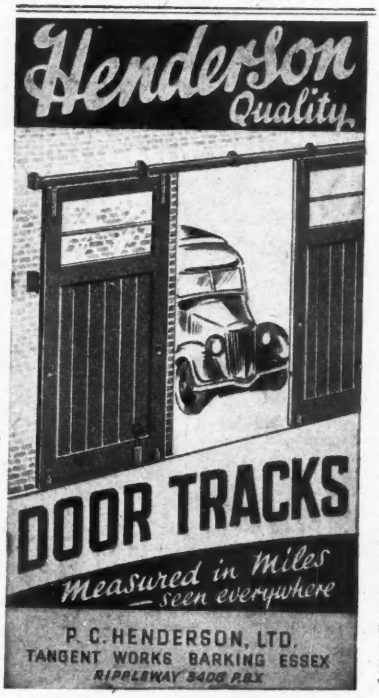
Furnished Houses (Rents).

In reply to questions, MR. BEVAN said that the Furnished Houses (Rent Control) Act, 1946, would, subject to the approval of Parliament of the Expiring Laws Continuance Bill, be continued in operation until the end of 1948, but the extension of its scope would require separate legislation for which no time was at present available.

Extra Rations.

MR. HURD asked the Minister of Food what proportion of building workers in rural areas were now receiving the promised extra rations of cheese; and if he was satisfied that this scheme operated fairly.

DR. EDITH SUMMERSKILL said that the Ministry did not know the number of building workers in rural areas, but the extra cheese ration had been granted to 87.6 per cent. of the workers on whose behalf applications were received up to September 30 last. There were, undoubtedly, difficulties in working the scheme, but the Minister was satisfied that every effort was being made to operate it fairly.



"FIBRE BUILDING BOARDS"

UNDER this title is published by the Building Boards Joint Committee a book on the technical aspects of the use of fibre building boards, produced by a common effort of all firms in the fibre building board industry. After setting out agreed names and definitions for the various classes and types of fibre building boards, the book incorporates in its 12 chapters, supplement and six appendices, sections which will be of use to practically everyone connected with building, from the student to the practising architect, and from the apprentice to the master builder. Chapters are devoted to a general description of each of the three main classes of fibre building boards—insulating boards, hardboards and wallboards—and their general uses. There are special references to thermal insulation and sound control, which will be valuable to the student; chapters on the construction of walls, floors and roofs, methods of fixing, joint treatment and surface finishes, illustrated by over 50 drawings. The photographic supplement contains 56 photographs illustrating the versatility with which architects and builders have used fibre building boards on large and small building projects. There are also six appendices dealing mainly with thermal transmittance through a wide variety of useful constructions, with and without insulation, and one giving the results of a co-operative programme of research undertaken by the Building Research Station and the Building Boards Joint Committee into the fire resistance of intermediate timber floors having insulating-board ceilings and into the rate of flame spread on the surface of various types of boards. The book is obtainable, price 5s., post free, from Melbourne House, Aldwych, London, W.C.2.

WAR DAMAGE COMMISSION

VALUE PAYMENTS FOR WAR DAMAGED BUILDINGS

THE War Damage Commission announce that the first bulk issue of value payments for properties which have been decided to be total losses as the result of war damage, will be made on November 10, 1947, which was fixed by a Treasury Order in July, 1947, as the date of which value payments in general could first begin to be made. The payments on that date will cover about 106,000 claims relating to about 140,000 properties. The cheques or payable orders to be issued will altogether amount to about £100,000,000, including the increase of 45 per cent. over 1939 values which the House of Commons approved in March of this year, and simple interest at 2½ per cent. a year from the date of damage to the date of payment. Income tax on the amount of the interest at the standard rate of 9s. in the £, and any unpaid war damage contribution, will be deducted. With each cheque or payable order will be sent a statement showing how the payment has been calculated, and an income tax certificate to enable the claimant to apply for a refund of tax where the standard rate is not payable by him.

The Chancellor of the Exchequer has asked the commission to remind readers of his appeal in his last Budget speech for the maximum investment of these payments in savings. He said: "I appeal to all those who receive large sums, whether for damage to business and chattels or as value payments to save as much as they can during these next years. This will help savings and hinder inflation, and there will be better opportunities later on than now for spending much of this money to good purpose."

In all, value payments amounting, with interest, to about £170,000,000, have to be made to about 155,000 claimants in respect of 216,000 properties. The Commission had hoped to be able to make payment in nearly all cases on November 10, but apart from cases which are under appeal, or where the original claimant has died and the present claimant has yet to show his title to receive payment, there are some 30,000 cases where the total payment has to be shared between two or more parties, and the Commission have not yet been told by the parties how they wish the money to be divided, despite the issue of reminders.

Further Bulk Payment.

The Commission hope to make in mid-December a further bulk payment of about £10,000,000 on 10,000 claims in which the necessary information on title or shares reached the Commission too late for payment on the first paying day. After that payments will be made at monthly intervals, probably in the middle of each month, as outstanding cases become ripe for payment.

Claimants who wish to raise any question on the payments made to them are asked to write to the appropriate regional office of the Commission, and not to the Commission's headquarters. The Commission cannot undertake to deal with all inquiries on individual cases by telephone either at headquarters or at regional offices.

Owners of war damaged properties are reminded that this announcement only applies to those cases which the Commission have determined to be "total losses," where a value payment and not a cost of works payment is to be made. Cases where a cost of works payment is due will continue to be dealt with as before.

BRIGHTENING BLITZED LONDON

W.V.S. "GARDENS SCHEME"

THE story of the W.V.S. "Gardens Scheme" which is doing much to make the blitzed areas of London more cheerful and bright by the planting of trees and shrubs sent as gifts from provincial areas was told by MRS. DE ROTHSCHILD at a meeting of the Housing Centre on September 30.

The speaker explained how the W.V.S. scheme started when their Chairman, Lady Reading, was in Poplar. There she saw an old lady, wheeling along a wheelbarrow, with a lilac tree in it. She learned that her lilac tree in the old garden had escaped damage and was fetching the tree to plant near her new home. It was decided that the best way of helping was to follow the W.V.S. 1944 plan, whereby every borough in London was adopted by a county or town in a safer part of England, each of which sent furniture to blitzed areas.

The sources of supply therefore came from the counties, and from some of the towns, of England. Although the towns were really in a better position to supply furniture, yet they managed also to send gifts for gardens. Thirty-six London boroughs had been adopted by 51 adopters.

The scheme had been started last year, and a rough total of some 5,000 people were helped in that year. This year, dating from April 1, over 5,000 had already been helped.

One of the most discouraging features for a prefab. tenant embarking on the making of a garden was the soil. Most of these prefabs. were situated on blitzed sites, and there was no proper soil. How were plants to be grown on mere rubble? The Ministry of Health was approached. They appreciated this point, and realising the advantages of these temporary houses having gardens, they issued a ruling allowing for expenditure on top soil as part of the site development. It might have been expected that since the Government was prepared to pay for this soil, it would be forthcoming, but this was not the case.

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LONDON BUILDERS AND INCENTIVES

"OVERWHELMINGLY IN FAVOUR."

LONDON builders are overwhelmingly in favour of the new incentives system for the building industry which comes into effect this month. This was announced by MR. D. C. BURGESS, Senior Vice-President of the London Master Builders' Association, at a meeting of the Association's Central No. 5 Area in Lambeth Town Hall on November 4. Mr. G. A. Dean, Chairman of the Area, presided.

"The acceptance by organised labour of the principle of bonus payments which has been contrary to their rules for generations," said Mr. Burgess, "marks the opening of a new era in the history of the building industry. Will it work? My answer is that it has got to work—not only to increase production but also to rehabilitate the building industry in the eyes of the public. Production per man and per man-hour in the building industry has been notoriously bad during recent years, and there has undoubtedly, from the figures, been slackness on many building jobs. But it is no use blaming the operatives for that. Methods which would not have been tolerated before the war crept in during the rush of war-time work.

"We have got to change all that—a lot of it has, of course, gone already—and I believe the new incentive bonus will clear away the rest.

"The chief danger to the success of the new incentives system comes not from the operatives—they see in it the chance of a greatly increased pay packet—but from those employers who fear that wages earned may be too high. My chief fear is that the wages earned may not be high enough, because the datum line is fixed in the wrong place. If that were to happen widely it might wreck the whole scheme. My hope is that by joint consultations all along the line that danger will be avoided.

"For the new system—it is a system be it remembered, not a scheme—allows for the greatest elasticity, and it may be varied to almost any extent between district and district and also between job and job. That is a valuable safeguard to both sides. Between us I am satisfied that we can make a real do of it, and make the building industry, what it certainly ought to be, the most efficient in the country."

London Building Apprentices.

THE London Building Trade Apprentices' Sports and Welfare Association is making a special appeal to all employers connected with the building industry in London who are visiting the Building Exhibition to give their support by becoming employer members. Advantage is being taken by increasing numbers of apprentices of the facilities offered to them, and to give these facilities an income of at least £2,000 a year is required. The Association is urgently in need of office accommodation in the inner London area. They want to rent a room with an installed telephone for this purpose. Perhaps some of our readers can help in this connection, and will advise the Secretary-manager, 3-7, Old Queen-street, S.W.1.

RATES OF WAGES IN THE BUILDING TRADE [AS FROM NOV. 16]

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification.	A	A1	A2	A3
Craftsmen	2/9	2/8½	2/8	2/7½
Labourers	2/2½	2/2	2/1½	2/1¼

Town.	Grade.
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A3
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone	A2
Aylesbury	A2
Aylesby	A
Aylsham	A3
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A1
Barnoldswick U.D.	A2
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A2)	A
Basingstoke	A2
Bath	A1
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A3
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamstead	A1
Berrington	A1
Berwick District	A1
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A1
Billing	A
Billingham U.D.	A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A1
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U.D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A1
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A2
Breconshire, County of	‡A3
Brent Knoll	A2
Brentwood	A
Bridlington	A1
Brierfield	A
Brighouse	A
Brighton	A1
Bristol	A
Broadstairs	A2
Bromsgrove U D.	A1
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A3
Burnham-on-Crouch	A3
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A3
Buxton	A1
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A3
Carlisle	A
Carmarthenshire, Cnty. of	‡A3
Carnarvonshire, Cnty. of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A1
Charmy Down	A1
Chatham & District	A1
Cheadle (Staffs.) R.D.	A
Chelmsford	A
Cheltenham	A1
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippen-ham Within and Harden-huish)	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A2
Congleton	A1
Consett	A
Conway	A2
Cornwall, County of	‡A3
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A1
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A3
Doncaster	A
Dorking	A1
Dorset, County of (except-ing Poole and Wimborne A1)	A3
Dover	A2
Dovercourt	A1
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A3
Epping	A
Exeter	A1
Fakenham	A3
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A1
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough U.D.	A1
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A1
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole	A
Gosport	A
Grantham M.B.	A1
Gravesend	A
Great Yarmouth	A1
Grimsby	A
Guildford District	A2
Guilsborou_h	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A1
Harpenden	A1
Harrogate	A
Hartlepools	A
Harwich	A1
Haslemere	A2
Hastings	A2
Hatfield	A
Haywards Heath	A2
Hemel Hempstead	A1
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A3
Herne Bay	A2
Hertford	A
Hexham	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A1
Hoddesdon	A
Holt (Norfolk)	A3
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon	A3
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A3
Jarrow B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A1
King's Lynn	A2
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M.B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A2
Letchworth	A1
Lewes	A2
Lichfield M.B.	A1
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A2
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A3
Lowestoft	A1
Loxton	A2
Luton	A
Lyneham (Devon)	A1
Macclesfield	A1
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A2
Malvern U.D.	A2
Manchester	A
Manningtree	A1
Mansfield M.B	A
March	A2
Margate	A2
Market Harborough	A1
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A3
Melton Mowbray U.D.	A2
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A1
Milford Haven	A2
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A1
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A2
Newmarket	A2
Newport, Mon	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A3
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A1
Oxted	A1
Paignton	A1
Peterborough	A
,, Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A3
Ramsgate	A2
Rayleigh	A1
Reading	A1
Redcar B.	A
Redditch U.D.	A1
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A1
Saxmundham	A3
Scarborough	A1
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A1
Shrewsbury M.B	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A2
Sleaford U.D.	A3
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A3
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A1
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B	A
Stourport U.D.	A1
Stowmarket	A3
Stratford-on-Avon M.B.	A1
Sunderland District	A
Sunningdale	A1
Sutton Coldfield M.B.	A
Swaffham	A3
Swanage	A3
Swansea	A
Swindon	A2
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A3
Thorpe Bay	A1
Thurrock U.D.C. Area	A
,, North of, to Billericay	A1
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington R.D.	A1
Wells (Norfolk)	A3
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A2
Whitby	A2
Whitstable and District	A2
Wickford	A1
Widnes	A
Wigan	A
Wigton	A3
Willington	A
Wilmslow	A
Wilts, County of	‡A3
Winchester	A2
Windermere	A3
Windsor and Eton	A1
Wisbech	A2
Witham	A2
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A3
Worcester C.B.	A
Workington	A
Worksop M.B.	A1
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A2
Wylam	A
Wymondham	A3
York	A

* For Birkenhead Liverpool, and London the rates are:—Craftsmen, 2s. 10½d.; Labourers, 2s. 3½d. In the case of London the rate beyond the 12-mile radius is:—Craftsmen, 2s. 10d.; Labourers, 2s. 3¼d.

† Plus 2d. per working day.

‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 1s. 9d. per hour. Women introduced to carry out work other than craft processes, 1s. 5½d. per hour.

For Building Trade Wages in Scotland, see page 528

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	7 10 0
Second Hard Stocks	7 0 0
Mild Stocks	6 0 0

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	Certain London L.M.S. Stations per 1,000. s. d.	Sites in PBMA Area, N. of Thames per 1,000. s. d.
Pressed	70 0	85 0
Keyed	72 0	87 0
Single Bullnose	90 0	105 0
Rustics	90 0	105 0
Whites	90 0	105 0

	£ s. d.
Best blue Pressed Staffs. (London Stns.)....	16 13 0
Do. Bullnose (London Stns.)	17 5 6
Blue Wire Cuts (London Stns.)	14 13 6

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 14 11 0	3 in..... 17 10 0

GLAZED BRICKS (London Stns.).			
Best White Ivory and Salt Glazed		D'ble Str'tch'rs	61 10 6
		D'ble Headers ..	55 15 6
Stretcher	46 0 0	One side&two ends	62 13 6
Headers	45 8 6	Two sides &one end	64 8 0
Quoins. Bullnose and 4½in. Flats	57 10 0	Splays and Squints	59 16 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.
Haulage to site 20s. 1,000.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.
HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	3 1
2½" " " 110 "	3 4
3" " " 100 "	4 0
4" " " 84 "	4 7

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup. 2 8	3" per yd. sup. 4 0
2½" " " 3 4	4" " " .. 5 3

CRANHAM TERRA COTTA

Size 12 x 9 x 2" per yd. super	3 1
Size 12 x 9 x 2½" " "	3 4
Size 12 x 9 x 3" " "	4 0
Size 12 x 9 x 4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES.

12 x 9 x 2" 3 1	12 x 9 x 3" 4 0
12 x 9 x 2½" 3 4	12 x 9 x 4" 4 7

Per yard super d/d. Free on site, London.
Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	4 1½
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. „	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. .....per ft. cube	4 7½
Do. do. delivered on road waggons as above stations ..... per ft. cube	4 7½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE— F.O.R. Quarries, Wirksworth, Derbyshire.	s. d.
Random blocks from 10ft. and over p.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality*. Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) .....per ft. super	8 0
6 in. rubbed two sides, ditto „	9 4
3 in. sawn two sides slabs (random sizes) ..... „	3 10
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) .... „	2 0
1½ in. to 2 in. ditto ..... „	1 9½
HARD YORK— Delivered at any Goods Station, London.	
Scrappled random blocks per ft. cube	12 0
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super	8 10
6 in. rubbed two sides, ditto .. „	10 6
4 in. sawn two sides slabs (random sizes) ..... „	5 8
3 in. ditto ditto..... „	4 3
2 in. self-faced random flags per yd. super	16 0

SAND.

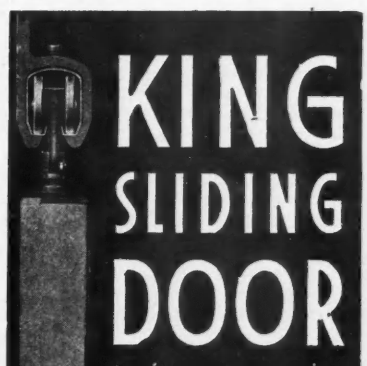
D/D site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

Thames Ballast	15s	9d. per yd.
Pit Ballast	15s.	10d. „ „
Pit Sand	15s.	2d. „ „
Washed Sand.....	17s.	0d. „ „
¾ in. shingle	15s.	2d. „ „
½ in. Broken Brick.....	17s.	6d. „ „
Pan Breeze.....	10s.	4d. „ „

CEMENT.

Best British Portland Cement. Standard Specification delivered London area.	£ s. d.
6 ton loads and upwards site.....per ton	2 19 6
1 to 6 tons site	3 2 6
In non-returnable paper bags charged at 10/– net per ton or 6d. each net per sack in lots of less than 1 ton.	
In non-returnable jute sacks charged at 8/– per ton.	
In returnable jute sacks charged at the rate of 35/6 net per ton of cement or 1/9½ net per sack in lots of less than 1 ton. Credit on return at 1/6 net per sack.	
In returnable cotton sacks charged at the rate of 3/4 net each sack. Credit on return at 3/–net each sack.	
"Ferrocrete" Rapid Hardening Cement: 6 ton loads and upwards site	3 5 6
1 to 6 tons site	3 8 6
In paper bags 10s. per ton extra.	
"Aquacrete" Water Repellent cement, 32/6 per ton on ordinary "Blue Circle" prices. In paper bags 8s. per ton extra.	
Red, Buff or Khaki "Colorcrete" in 6-ton lots	5 1 0
In paper bags 8s. per ton extra.	
Other colours, according to colour. In 4 ton lots from 196/– to 405/– per ton (including paper bags).	
"Snowcrete" White Portland Cement (in free paper bags).....	11 12 0
Under one ton ..... per cwt.	0 13 11
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 6 ton lots and upwards	4 1 0
In paper bags 8s. per ton extra.	
Super Cement (Waterproof), bags extra ..	4 6 6
Cullamix Tyrolean Finish....£7 13 6 to (1 ton lots and upwards, including cost of Paper Bags).	9 7 0

	£ s. d.		£ s. d.
Roman Cement	8 10 0	Keen's Cement, White	7 17 3
Parian Cement	7 10 6	„ Pink	7 11 0



PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 10 9	Sirapite, Coarse..	4 11 6
„ White	5 0 3	„ Finish ..	4 19 6

Above prices for 1-ton loads and over London Area.

Best Ground Blue Lias Lime	4 5 9	Grey Stone Lime Chalk Lime	4 7 0 4 2 3
Granite Chippings	2 8 0	Hair per cwt.	4 4 6

NOTE.—Sacks are charged 2s. 0d. each, and credited 2s. 0d. if returned in good condition within one month, carriage paid.
Stourbridge Fireclay in paper bags, £3 4s. 0d., 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.....Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£9 5 0
Ditto hand-made ditto	11 0 0
Ornamental ditto	11 12 6
Hip and valley tiles—Hand made..... (per dozen) —Machine-made	18 6 17 6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station.

Per 1,000 actual	£ s. d.		£ s. d.
24 by 12	65 17 6	18 by 10	33 12 6
22 by 12	53 3 0	18 by 9	29 6 0
22 by 11	48 4 3	16 by 10	29 2 6
20 by 12	46 10 0	16 by 8	23 4 6
20 by 10	42 10 0		

NOTE: Breakage in transit, purchasers' responsibility.

TIMBER, SOFTWOODS AND HARDWOODS

HOME GROWN TIMBER PRICES.—See *Statutory Rules and Orders*, 1947, No. 94, price 5d. net.
IMPORTED SOFTWOOD PRICES.—See *Statutory Rules and Orders*, 1947, No. 731, price 1s. 1d. net.
IMPORTED HARDWOODS PRICES.—See *Statutory Rules and Orders*, 1947, No. 1525, price 1s. 1d. net.
Note.—The above can be obtained from H.M. Stationery Office, York House, Kingsway, W.C.2.

GLUE

Best Scotch Glue .....per ½ cwt.	4 14 6
Croid Glue .....per lb.	2 9

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.
S.D. BIBCOCKS CRUTCH HEAD, FOR IRON.
½ in. 66/– ¾ in. 108/– per doz.
TOILET BIB COCKS FOR IRON.
½ in. 114/– ¾ in. 171/– per doz.
S.D. STOP COCKS FOR IRON.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
72/– 111/– 189/– 269/– 363/– 590/– per doz.
S.D.S. COCKS WITH TWO UNIONS FOR LEAD.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
102/6 164/– 264/6 369/– 438/– 736/– per doz.
DOUBLE NUT BOILER SCREWS.
½ in. ¾ in. 1 in. 1¼ in. 1½ in. 2 in.
17/– 20/– 33/– 68/– 108/– 140/– per doz.
HEAVY CROYDON BALL VALVES.
½ in. ¾ in. 1 in. 1¼ in. 1½ in.
93/– 149/– 185/– 371/– 500/– per doz.
CAPS AND SCREWS.
1¼ in. 1½ in. 2 in. 3 in. 3½ in. 4 in.
23/6 26/6 45/– 68/– 89/– 112/– per doz.
BRASS SLEEVES.
1½ in. 2 in. 3 in. 3½ in. 4 in.
29/– 31/– 67/– 83/– 101/– per doz.
LEAD TRAPS WITH BRASS CLEANING SCREWS.
1½ × 6 lb. 1½ × 6 lb. 2 × 7 lb. 3 × 7 lb.
Lead P. 57/– 69/– 111/– 144/– per doz.
Lead S. 69/– 84/– 138/– 153/– per doz.
SOLDER.—Plumbers', 2/9, Tinmen's, 3/6, Blow pipe, 3/8 per lb.
Copper Tubes....2/1 per lb. Basis.
Brass Tubes....2/– lb. Basis.
Basis prices are subject to extras.

LEAD, &c.

(Deliveries in London 5 cwts.)	Per ton. £ s. d.
LEAD.—Sheet, English, 3½ lb. and up	108 15 0
Pipe in coils	110 0 0
Soil pipe	113 0 0
Compo pipe	116 0 0

NOTE.—Country delivery, 10/– per ton extra, lots under 3 cwt. 4/– per cwt. extra and over 3 cwt. and under 5 cwt., 3/– per cwt. extra. Extra if cut to size.
Old lead, ex London area, per ton £70 0 0 Buyers pay carriage

*The information given on these pages has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(*contd.*)
See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

	£ s. d.
R. S. Joists, cut and fitted	£30 0 0
Plain Compound Girders	34 10 0
" " Stanchions	42 0 0
In Roof Work	52 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	26 10 0	½ in.	24 5 0
⅝ in.	25 15 0	⅝ in to 2¾ in.	23 10 0
¾ in.	25 0 0		

WROUGHT TUBES AND FITTINGS.
Deliveries from works.
Deliveries from London stock further 2½% gross.

	Tubes, ½"/6"	Tubulars, ¼"/6"	10/17 and 19/24	Flanges. ½"/2"	2½"/6"
	%	%	%	%	%
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ¼"/⅛" inclusive, charged extra of 5% less gross.
Fittings. Figs. 25/34 5% less gross discount.
Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS.—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	2/2	1/11	6½d.
3½ in.	2/5½	2/2	6½d.
4 in.	2/5½	2/3½	10½d.
4½ in.	2/10	2/7½	11½d.
5 in.	3/1	3/–	1/3

O.G. GUTTERS.

3 in.	2/10	2/6½	7½d.
3½ in.	3/2	2/6½	10½d.
4 in.	3/2	2/7½	11½d.
4½ in.	3/4	3/1	1/3
5 in.	4/–	3/7	1/4

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Angles.	Branches.
2 in.	4/6	2/4	3/6
2½ in.	4/8	2/8	4/–
3 in.	5/3	3/5	4/11
3½ in.	6/–	3/11	5/9
4 in.	6/11	4/9	6/11

NET PRICES.
Tonnage allowance— 4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	5/5	4/1	5/–
2½ in.	5/8	4/7	6/2
3 in.	6/3	5/–	7/5
3½ in.	7/1	6/2	8/7
4 in.	8/1	6/11	10/–

L.C.C. COATED DRAIN PIPE.

	cwt. qr. lbs. per yard. in 9 fts.	Bends.	Branches.
4 in.	1 1 17	10/8	9/8 16/11
6 in.	2 0 1	15/10	20/– 34/8

Per ton basis in London.

	£ s. d.
IRON.—Staffordshire Crown, Merchant quality	24 10 0
IRON.—Staffordshire Marked Bars	25 5 0
Mild Steel Bars	20 10 0
Mild Steel Hoops	22 7 6

Ex Merchant's Stock. per ton (two-ton) lots.

Soft Steel Sheets, C.R. and C.A.—	£ s. d.
20 gauge	26 5 0
24 gauge	27 5 0
26 gauge	28 5 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	29 12 6
24 gauge	31 7 6
26 gauge	33 12 6
Galvanised Flat Sheets, C.R. and C.A.—	
20 gauge	30 12 6
24 gauge	32 7 6
26 gauge	34 12 6

Per ton.

	£ s. d.
Cut Nails, 3 in. and up	31 10 0

ALL NET.

METAL WINDOWS.—Standard sizes suitable for complete houses, included all fittings, painting two coats, and delivery to job, average price about 4s. 6d. to 4s. 9d. per foot super.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil (5 galls.) .. per gallon	1 3 3
Boiled Linseed Oil (5 galls.) "	1 3 7
Genuine White Lead (free kegs) cwt.	7 7 0
Genuine White Lead Paint (tins free) gall.	2 9 0
Genuine Red Lead cwt.	6 12 6
Putty (free packages) cwt.	3 0 9
Size, XD quality f'kn.	0 9 0

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from January 1, 1946. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	Craftsmen 2/6		Labourers 2/-	
Aberdeen	A	Dumfriesshire	A	Inverness	A
Ayrshire	A	Dundee	A	Inverurie	A
Banff	A	Dunoon	A	Kincardineshire	A
Berwickshire	A	East Fife	A	Kinross-shire	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A
Broughty Ferry	A	Edinburgh	A	Midlothian	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A
Doune	A	Forfarshire	A	Moray and Nairn	A
Dunblane	A	Glasgow	A	Newport	A
Dunbartonshire	A	Greenock	A	Peeblesshire	A
Dumfries	A	Hamilton	A	Perth	A
				Perthshire	A
				Peterhead	A
				Renfrewshire	A
				Rothesay	A
				Roxburghshire	A
				St. Andrews	A
				Selkirkshire	A
				Stewartry	A
				Stirlingshire	A
				Stornoway	A
				Tayport	A
				West Lothian	A

The Scottish N.J.C. award on which this is based does not provide for any variation to current rates of Apprentices' wages, which will be considered by the General Council of the Apprenticeship Scheme.
The Information given in this table is copyright.

Painters' rates : 2/6 Grade A ; 2/5 Grade B. (Grade B towns are Banff and Moray and Nairn).

VARNISHES, &c.

		Per gallon £ s. d.
Oak Varnish	Outside	1 6
Fine do.	"	1 16
Fine Copal	"	1 15
Pale Copal	"	1 12
Floor Varnish	Inside	1 10
Fine Pale Paper	"	2 1
Hard Drying Oak	"	1 10
Fine Hard Drying Oak	"	1 12
Fine Copal Varnish	"	1 13
Best do.	"	1 16
Best Japan Gold Size	"	1 15
Best Black Japan	"	1 8
Brunswick Black		1 4
Berlin Black		1 8
Knotting (patent)		1 12
French and Brush Polish		1 18
Liquid Dryers in Terebene		1 8

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY.

CUT SIZES.	Per ft. super. d.
18 oz.	3½
24 oz. Clear	5½
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.	Per ft.
Rolled plate, ¼ in.	6½
Rough cast double rolled, ¼ in.	7½
Rough cast double rolled, ½ in.	7½
Figure rolled, and Cathedral, white	7½
Figured rolled and Cathedral, tinted	10½
Rolled sheet	6
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	11d.

(*Continued at foot of next column.*)

The Hall Mark AYGEE *of Craftsmanship*

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AYGEE LTD.

ENGLAND'S LARGEST GLAZING CONTRACTORS

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LONDON, S.E.1. 'phone:
WATerloo 6314 (6 lines)

THE SCOTTISH BUILDER

NEW BUILDINGS

Auchinleck.—Housing scheme proposed, for which the architect is S. MacColl, 23, Beckford-st., Hamilton.

Douglas.—New commercial hotel buildings proposed, for which the architects are Whyte & Barrie, 38, High-st., Lanark.

Glasgow.—Alterations and additions for Iona Youth Trust, for which the architects are Gillespie, Kidd & Coia, 19, Waterloo-st., Glasgow.

Glasgow.—Alterations and additions for North of Scotland Bank at 61 to 65, St. Vincent-st., for which the architect is L. A. Ross, 223, West George-st., Glasgow.

Lanarkshire.—At Douglas housing site, 85 houses to be erected by the Scottish Special Housing Association, Ltd., Palmerston-pl., Edinburgh.

Larkhall.—New business premises, also offices, for which the architect is J. Burns, 34, Church-st., Larkhall.

Tollcross.—New buildings for various plants at Clyde Iron Works, for which the plans are in the hands of Colville (Uddingston), Ltd., 190, West George-st., Glasgow.

SCOTTISH WAGE RATES

AT a meeting of the Scottish National Joint Council for the Building Industry, held on October 30, the operatives tabled a demand for an increase of wages of 3d. per hour to operate from November 16 next, in return for which they stated that they were prepared to cancel Working Rule 12, which forbids the operation of any scheme of bonus payment or piecework, and that they were prepared to consider and accept a system of bonus payments.

The employers pointed out that the time for making a demand of this kind was past, but agreed to waive the constitution of the Council to enable the matter to be discussed; thereafter the Council adjourned for consideration of the claim, and it is expected that it will meet again in about a week.

Change of Title.

Due to the increased range of activities undertaken by John Kent (Plasterers), Ltd., it has been thought expedient, as from October 14, to change the name to John Kent (London), Ltd. This change will not, of course, in any way affect contracts which are now being carried out, and the company will continue to operate from 25, Ballards-lane, Finchley, N.3.

(*Continued from previous column.*)

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10½

HOLLOW GLASS BLOCKS.

	s. d.
P.B. 2—5½ in. × 5½ in. × 3¼ in.	2 6 each net
P.B. 3—7½ in. × 7½ in. × 3¼ in.	3 6 "
P.B. 32—7½ in. × 7½ in. × 3½ in.	3 6 "
Radiused Corner Brick to match up with—	
P.B. 2	4 6 "
P.B. 3	6 0 "
P.B. 32	6 0 "

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

NOVEMBER 12.

†**Cumberland C.C.**—Erection of first portion of secondary school at Wigton. County A., 4, Alfred-st., North, Carlisle.

††**Gt. Yarmouth C.B.**—Erection of first part of Junior School at Beccles-rd., Gorleston. B.E. Tenders by Dec. 10.

†**Wakefield R.D.C.**—46 houses at 9 sites. W. E. Massie, E. and S. Dep. £1 1s. Tenders by November 22.

NOVEMBER 13.

†**Wilts E.C.**—Additional classroom accommodation at Corsham Mixed School. County A., County Hall, Trowbridge. Dep. £2 2s. Tenders by December 11.

NOVEMBER 15.

Pudsey T.C.—Conversion of Littlemoor-rd. day nursery into temporary housing accommodation. B.S.

NOVEMBER 17.

Kingsbridge R.D.C.—1 pair block of houses at Blackawton and 3 pair blocks of houses at East Prawle, with small site works. H. Parsons, Architect, Kingsbridge. Dep. £2 2s.

Neath R.D.C.—8 Airey houses at Cae Wathan site, Burrows-rd., Skewen. E. and S. Dep. £3 3s.

Nottingham T.C.—Boiler House Superstructure (Extension "D," Contract No. 14) at North Wilford Power Station. Cost approx. £100,000. R. M. Finch, O.B.E., M.I.C.E., City E. Dep £5.

Weymouth and Melcombe Regis U.D.C.—Restoration of Pavilion and Palm Court, Weymouth. B.S. Dep. £2 2s.

NOVEMBER 18.

Luton T.C.—Construction of control room at Sundon. Boro' Electrical E. Dep. £2 2s.

NOVEMBER 19.

Doncaster C.B.—30 houses (brick construction) at Wheatley Park estate. Estates S., 15, South-parade. Dep. £3 3s.

Eastbourne T.C.—Repair and restoration of various buildings at Central Stores, Cavendish Bridge. Boro' Electrical E., Electric House, Grove-rd.

Poole T.C.—Shower baths, etc., at Poole Grammar School. B.E. and S. Dep. £1 1s.

Wadebridge R.D.C.—84 Airey houses at various sites. A. E. Bewes, S., Council Offices, Wadebridge. Dep. £2 2s.

NOVEMBER 20.

Chailey R.D.C.—46 Airey houses at various sites. S., Council Offices, Lewes House, Lewes. Dep. £2 2s.

***Ludlow R.D.C.**—6 houses at Diddlebury. A. E. Wilson, F.I.Q.S., Broad Gate-chbrs., Ludlow. Dep. £2 2s.

Yeovil T.C.—Pumping station at Cattistock Farm. B.S.

NOVEMBER 21.

Derby C.B.—One pair of staff cottages at Mental Hospital, Kingsway, Derby. Thos. W. East (F.), Boro' A. Dep. £2 2s.

Okehampton R.D.C.—16 traditional houses and incidental works at O.S.582, North Tawton. L. G. Bailey, E. and S., 3, Station-rd. Dep £2 2s.

Salop C.C.—Alterations to hutted camp to provide temporary modern School. A. G. Chant, County A., 5, Belmont, Shrewsbury.

NOVEMBER 24.

***Acton T.C.**—New buildings, extensions and alterations to existing buildings at Central Depot, Wales Farm-rd. B.E.

***Bootle C.B.**—Rebuilding and major repairs of ladies' plunge bath at Balliol-rd. B.E. and S.

Manchester E.C.—Repair of war damage at Atherton-st. School, Quay-st. City A. Dep. £1 1s.

NOVEMBER 27.

***Ealing T.C.**—Alteration and conversion of "Oakhurst," St. Stephen's-rd., W.5, into 6 s.c. flats. B.E. Dep. £3 3s.

NOVEMBER 28.

***Stepney B.C.**—Reconstruction of 14 dwellings at Brightlingsea-pl., E.14. Contract No. 666. B. W. Stuttle (F.), B.E. and S., Duval-st., E.1. Dep. £5.

DECEMBER 1.

Beckenham T.C.—Repairs to houses at Elmers-end estate (Contract No. 3). B.E. and S. Dep. £2.

Southend-on-Sea C.B.—Alterations and additions to lavatory accommodation at 49, Alexandra-st. B.E. Dep. £2.

Southend-on-Sea C.B.—Erection of main workshops at London-rd. Schools, Municipal College. Architect to Ed. Committee, 30, Alexandra-st. Dep. £2.

DECEMBER 3.

Lindsey C.E.C.—Canteen at Sibsey Free School. A. R. Clark, County A., County Offices, Lincoln.

DECEMBER 5.

***Billericay U.D.C.**—(a) 8 Airey houses at Pound-la., Laindon; (b) 14 Airey houses at Woolshots-rd., Wickford. H. B. Mayhew, F.I.A.S., S., Council Offices, High-st. Dep. £2 2s.

Coleraine.—24 houses at Garvagh, Co. Londonderry. W. and M. Given, Architects, The Diamond, Coleraine. Dep. £3 3s.

DECEMBER 12.

Skibbereen U.D.C.—10 houses at Upper Bridge Street. P. Murray. Acting T.C., Town Hall. Dep. £1 1s.

DECEMBER 15.

Salford T.C.—Reconstruction of Courts at Town Hall. City E. Dep. £3 3s.

NO DATE.

Northleach R.D.C.—Conversion of 24 Army huts at Windrush R.A.F. Camp and 16 at Whittington Court Camp, Andoversford. K. B. Mackenzie (F.), Bibury, Cirencester.

Northleach R.D.C.—26 houses at 7 sites. K. B. Mackenzie (F.), Bibury, Cirencester. Dep. £2 2s.

MISCELLANEOUS

NOVEMBER 20.

Harrow U.D.C.—Demolition of 33 trench shelters. S. Dep. £2.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

NOVEMBER 17.

L.C.C.—Cleaning, repainting, etc., of Blackwall and Rotherhithe Tunnels and Bridge over East London Railway. Chief E. Dep. £1.

ROADS, SEWERAGE AND WATER WORKS

NOVEMBER 17.

Bucks C.C.—Surface-water drainage work at Amersham/Rickmansworth-rd. County S. Walton-st., Aylesbury. Dep. £2.

Hendon T.C.—225 lin. yds. of 30-in. dia. and 290 lin. yds. of 36-in. dia. concrete tube surface water sewers, etc., at Devonshire-rd., and Oakhampton-rd. B.E. and S. Dep. £2 2s.

Use CROID - the modern glue

Behind the success of CROID glue in industry lies the story of Croid Service. This Service carefully studies each manufacturer's problems and prescribes the right grade of CROID for his requirements. The number of satisfied users is a tribute as much to the Service as to CROID itself.

Croid saves time and trouble

● *Croid Limited, 109 Kingsway, London, W.C.2*

Manchester T.C.—Sewering, draining, kerbing, flagging, paving and completion of Barrow Hill-rd., Cheetham. City S. Dep. £1 1s.

NOVEMBER 18.

Barnsley C.B.—820 lin. yds. 30-in. dia. concrete pipe surface water sewer; 850 lin. yds. 18-in. and 15-in. dia. concrete pipe main outfall sewer, etc., Carlton. B.E. and S. Dep. £3 3s.

Hereford T.C.—Road and sewer works at Holmer-rd. City E. Dep. £2 2s.

NOVEMBER 20.

Cambridge T.C.—Sewage pumping station at Church-end, Cherry Hinton. B.E. and S. Dep. £5 5s.

NOVEMBER 21.

Chelmsford R.D.C.—Laying and jointing of water mains at Boreham, Great Leighs, Danbury, Good Easter and Ingatestone. E. and S., Council Offices, New London-rd., Chelmsford.

Stafford T.C.—4,420 yds. of 3-in. and 4-in. dia. spun-iron mains, etc. Water E., Mount-st. Dep. £2 2s.

NOVEMBER 22.

Godalming T.C.—Supplying and laying of water mains at Compton and Milford. Water E. Dep. £2 2s.

St. Albans R.D.C.—Water main extension at Redbourn estate. S.

NOVEMBER 24.

Blackwell R.D.C.—307 yds. of 9-in. sewer, etc., at Town-st. and Wharf-rd., Pinxton. E. and S., 100, Chesterfield-rd., South, Mansfield. Dep. £2 2s.

Ongar R.D.C.—8,100 lin. yds. of 3-in. dia. and 850 lin. yds. of 4-in. dia. spun-iron water mains, etc., at three parishes. E. and S. Dep. £2 2s.

NOVEMBER 25.

Northampton R.D.C.—Sinking new well at Hartwell. S., 1, Cheyne-walk.

Wareham and Purbeck R.D.C.—Laying of about 5,700 yds. of 6-in. and 9-in. glazed ware and cast-iron sewers, etc., at Langton Matravers. T. Ward Whitfield, F.S.I., M.I.Struct.E., Hilperton, Trowbridge, Wilts. Dep. £2 2s.

NOVEMBER 27.

Ashbourne R.D.C.—Construction of reservoir and sinking of borehole. H. Litchfield, S., Compton Offices, Ashbourne. Dep. £1 1s.

NOVEMBER 28.

Kidderminster R.D.C.—Road, sewerage and water works at Cookley housing site. E. and S., Land Oak House, Kidderminster. Dep. £2 2s.

NOVEMBER 29.

Brackley T.C.—Laying of water main along trunk road, A.43, Northampton-Oxford. T.C.

North Devon Water Board.—Laying and jointing of spun-iron water mains at Down St. Mary and Cheriton Cross and Cheriton Bishop. Rofe and Raffety, 3, Victoria-st., Westminster, S.W.1. Dep. £2 2s.

Solihull U.D.C.—Roads and sewers at Redlands-rd. and Heath-gdns. E. and S., 90, Station-rd. Dep. £2 2s.

DECEMBER 1.

Orpington U.D.C.—New street works at Rookery-gdns., St. Mary Cray. E. and S. Dep. £3 3s.

Taunton T.C.—Construction of 12-in. and 15-in. sewers at Lyngford. B.E. and S.

DECEMBER 3.

Ware R.D.C.—Roads and water sewers at Gt. Amwell estate. S., 97, New-rd., Ware. Dep. £1 1s.

DECEMBER 4.

Nantwich R.D.C.—Roads, sewers and footpaths at Higher Banbury. E. and S. Dep. £2 2s.

DECEMBER 15.

Wigton R.D.C.—9,360 lin. yds. of 9-in. and 6-in. spun-iron pipes, etc., from Fletchertown to Aspatria. W. K. Rodwell, 44, Park Cross-st., Leeds 1. Dep. £3 3s.

DECEMBER 17.

Wetherby R.D.C.—Sewerage and sewage disposal works at three villages. W. K. Rodwell, A.M.I.C.E., E., 44, Park Cross-st., Leeds, 1. Dep. £3 3s.

GENERAL BUILDING WORK

(LONDON)

Chiswick.—REBUILDING.—Of nurses' home, Burlington-la. Hospital. Architects are F. Rowntree & Sons, 62, George-st., W.1.

Dulwich.—SHOPS AND OFFICES, ETC.—At Croxted-rd. and Park Hall-rd., contemplated by Estates' Committee of Alleyn's College. Plans will be prepared by Austin Vernon (F.), 21, Catherine-pl., S.W.1.

Enfield.—FLATS.—Plans by Robert Brewin, 9, Wellington-rd., Enfield, for 249 flats, The Ridgeway.

Finsbury.—DWELLINGS.—Guinness Foundation, 5, Victoria-st., S.W.1, considering redevelopment of estate, Lever-st. Architect is E. G. Bax (F.), 12, Buckingham-st., W.C.

Hampstead.—FLATS.—Plans by Sir Charles Ruthen & Co., 1, King's-mews, Holborn, for 8 flats, 47, Greencroft-gdns.

Holborn.—ADAPTATIONS.—B.C. has appointed Mr. Grey Wornum, F.R.I.B.A., 39, Devonshire-st., W.1, as architect for the adaptation of Cockpit-yard

Hornsey.—ADDITIONS.—Including offices, canteen, etc., Palace Approach, Priory-rd., proposed by North Middlesex Motor and Engineering Co., Ltd. Architect is C. W. Boswell, Westbrook, Barrington-rd., N.8.

Kilburn.—FLATS.—Plans by Edward Armstrong (F.), 19, Manchester-sq., W.1, for six blocks of flats, Kilburn Vale.

Lee.—HOSPITAL ALTERATIONS.—L.C.C. propose to remodel the sanitary accommodation at Block A of Grove Park Hospital at £6,485.

Leyton.—FACTORY ESTATE.—A preliminary layout plan has been prepared for Mr. D. Freeder for a new factory estate at Lea Bridge-rd.

Leyton. — EXTENSIONS. — To Fingal Works, Staffa-rd., proposed by Reliance Electrical Wire Co., Ltd. Architects are Elliott, Cox & Partners, Coastal-chbrs., Buckingham Palace-rd., S.W.1.

London.—HOUSING SITE.—L.C.C. propose compulsory purchase of following sites for housing development: (i) Leyton-sq., Camberwell—site of about 7.8 acres to form an addition to council's Friary estate; estimated cost of acquisition, etc., is £120,000. (ii) Barrie-st., Paddington—two sites of 2.3 acres; the greater part of the sites is cleared of buildings as a result of enemy action, and the existing buildings are severely damaged; cost of acquisition, etc., is £100,000. (iii) Bandon-rd., Bethnal Green—four sites of 7.1 acres; cost of acquisition, etc., is £55,000. (iv) Adelaide-rd., Hampstead—site of 2.4 acres; cost of acquisition, etc., is £15,000. (v) New Kent-rd., Southwark—two sites, together about 1.8 acres; cost of acquisition, etc., is £35,000. (vi) Wimbledon Park-side, Wandsworth—a site of 2.64 acres, close to other sites which the council has decided to acquire; estimated cost of acquisition, etc., is £33,000. (vii) Edith-villas, Fulham—site of about 2 acres with frontages to Edith-villas, Mornington-ave. and West Cromwell-rd.; cost of acquisition, etc., is £16,500.

Rotherhithe.—REBUILDING.—Of war-damaged houses, 18-22, Culling-rd. Architects are White and Travis, 26, Portugal-st., W.C.2.

St. John's Wood.—ALTERATIONS.—To flats, 23, Avenue-rd. Architect is H. S. Jatelzki, 51, Fitzjohns-ave., Hampstead, N.W.

St. Marylebone.—RECONSTRUCTION.—It is proposed to reconstruct the Maids' Home at the Hospital of St. John and St. Elizabeth, Grove End-rd.

St. Marylebone.—OFFICES.—Messrs. Gordon and Fitch, Eagle House, Jermyn-st., S.W.1, are the architects for proposed offices at Nos. 7, 8, 9 and 10, Chandos-st.

St. Marylebone.—REBUILDING.—B.C. has raised no objection to an application by Mr. M. Ayrton to rebuild the administrative block at Bedford College, Regent's Park.

St. Marylebone.—FLATS.—Mr. Louis de Soissons (F.) is the architect for the conversion of No. 57, Carlton-hill into 6 flats.

St. Marylebone.—DEVELOPMENT.—B.C. Housing Committee have suggested to the Portman Estate that they proceed with the preparation of plans for the Lisson-gr. site (No. 72) between Hayes-pl. and Portman-bldgs. (40 flats).

St. Marylebone.—FLATS.—L.C.C. propose block of 40 flats at Aberdeen-pl., at a cost of £70,560.

St. Pancras.—ADDITIONS.—Proposed at factory, Flaxman-ter., of Solicitors' Law Stationery Society, Ltd. Architects are Kemp and How, 4, Bloomsbury-sq., W.C.1.

Southgate.—FLATS.—B.C. propose to erect working-class flats on land at rear of Bowes-rd., New Southgate. Compulsory purchase order has been confirmed.

Stepney. — DWELLINGS. — Sutton Dwellings Trust, Victoria House, Southampton-row, W.C.1, propose 30 dwellings, Sceptre-rd. Architect is Victor Wilkins (F.), 12, York-bldgs., Adelphi, W.C.2.

Stepney.—PLAYING FIELD.—King George's Fields Foundation to donate £50,000 for laying out memorial playing field, St. Dunstan's Church. Foundation's architect is W. H. Ansell (F.), 5, Verulam-bldgs., Gray's Inn, W.C.1.

Stoke Newington.—HOUSING.—The B.C. propose to appoint Messrs. Howes and Jackman, FF.R.I.B.A., as architects for proposed housing scheme at 2-6, Howard-rd. and 1-7, Clonbrock-rd. Messrs. E. C. Harris and Partners are to be the quantity surveyors.

Stoke Newington.—HOUSING.—Layout plans are being prepared by the council's architect for the development of 1-17, Defoe-rd. for housing purposes.

Walthamstow. — ALTERATIONS. — To factory, Byron Works, Blackhorse-la., for W. B. Bawn & Co., Ltd. Plans by Chamberlain and Willows, 23, Moorgate, E.C.2.

West Ham.—SCHOOL REBUILDING.—E.C. has re-received approval for the expenditure of £49,282 for rebuilding Regent-la school.

Westminster.—REMODELLING OF FLATS.—L.C.C. have prepared scheme for remodelling damaged portions of Turner and Ruskin-bldgs., Millbank Estate. Estimated cost, £40,865.

(PROVINCIAL)

Bangor (N. Wales).—University College of North Wales Board of Governors propose Hall of Residence for women students.

Batley.—Members of Church of Christ, Birstall, propose church at Birstall.

Bollington.—Bollington Printing Co. propose factory buildings off Inglesley-rd.

Bolton.—T.C. approved:—Reconstruction and alterations to works at Victoria-st. for J. Pendlebury & Sons, Ltd.; additions to works at Back Dorset-st. for Dale Textiles, Ltd.; additions off Back Bradford-st. South for Theosophical Trust (Lancashire), Ltd.; dining centre at Oxford-gr. school for E.C.—T.C. propose crematorium at Overdale, Heaton.

Bournemouth.—Bournemouth Times, Ltd., to erect offices, etc., at Branksome. Plans by A. J. Seal & Partners, Majestic-chbrs., Westover-rd., Bournemouth.

Brighouse.—T.C. approved:—Additions at Victoria Works for D. R. Plews, Ltd.

Burnley.—Catholic Authorities propose special agreement schools for boys and girls on approved sites.

Bury.—E.C. propose:—School canteen at Maxwell-st. County Secondary school at Hazel-ave. —T.C. approved Canteen at works, Lord-st., for Bentley & Jackson, Ltd.

Buxton.—Litton Silk Mills Co., Ltd., propose alterations and additions at Litton Mills.

Cheadle and Gatley.—U.D.C. approved factory, office and warehouse at Stockport-rd. and Old-rd. for Associated Bolland Industries, Ltd.

Cheltenham.—Cavendish House (Cheltenham), Ltd., to erect restaurant at departmental stores, 34, 36, The Promenade. Plans by L. J. Young & I. M. Williams (AA.), Hepworth-chbrs., High-st., Cheltenham, Glos.

Chester.—Deans and Canons of Chester Cathedral propose repairs to Cathedral. B. Miller (B.Arch.) (F.), architect, 3, Abercromby-sq., Liverpool.

Chesterfield.—Derbyshire E.C. propose extensions at Staincliffe school. Plans by F. Hamer Crossley (F.), County A., St. Mary's Gate, Derby.

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Chesterfield.—Royal Infirmary Board of Governors propose conversion of isolation hospital, Penmore, into maternity unit.

Clay Cross.—Derbys. E.C. propose extensions at Tupton Hall school at £9,200. Plans by F. Hamer Crossley (A.), County A., St. Mary's Gate, Derby.

Eastbourne.—Plans prepared by Kenneth F. Wray, 43, Gildredge-rd., Eastbourne, for conversion into flats of Bishopsbourne, Carlisle-rd.

Guildford.—R.D.C. approved alterations and additions at Artington Cold Store, Peasmarsh, for use by British Overseas Airways Corporation for preparation and storage of meals, at £40,000.

Hastings.—A. L. Cooke to erect paper warehouse at 91-93, Middle-rd., Ore. Plans by Kenneth F. Wray (F.), 43, Gildredge-rd., Eastbourne.

Hatfield.—R.D.C. approved Herts Agricultural Executive Committee's scheme for 18 houses at Essendon.

Hemel Hempstead.—R.D.C. to develop Barnes estate, King's Langley, by erection of approx. 60 houses and flats, and has approved layout prepared by F. R. S. York, architect, 35, Welbeck-st., W.1.

Heywood.—T.C. approved:—Day nursery at works, Aspall-st., for Mutual Mills, Ltd.

Hollingbourne (Kent). — R.D.C. propose to erect 80 houses. Plans by Lawrence Farman (F.), 42, Richmond Park-rd., East Sheen, Surrey.

Hull.—Hull Savings Bank Trustees propose branch premises at Hall-rd. Plans by Horth & Andrew, Custom House-bldgs., Whitefriargate, Hull.

Jarrow.—Licences have been issued to North-Eastern Trading Estates, Ltd., Low Fell, Gateshead, for erection of three factories at Bede estate at £26,339, £6,506 and £10,530.

Kenilworth.—Youth Organisation propose youth centre at £8,000.—Warwickshire E.C. propose extension of County Secondary school.

Leytonstone (Essex).—Leytonstone Football Club prepared plans for new stadium at £40,000.

Lowestoft.—British American Salmon Curing Co., Ltd., London, to build fish-curing factory at Ness-rd. Plans by Mence & Smith, 15, Adeline-pl., Bedford-sq., W.C.

Macclefield.—Fifty Shilling Tailors, Cardigan-cres., Leeds 4, propose shops at Mill-st.

Manchester.—T.C. approved:—Alterations at Queen's-chbrs., John Dalton-st., for H. Brooks & Son, H. S. Fairhurst & Son (FF.), Chancery-chbrs., 55, Brown-st.; alterations at Rochdale-rd., Collyhurst, for Lee Bros. (Hugh Lee), Ltd., H. A. Yearsley (L.), architect, 14, Alan-rd., Withington; school canteen, Shadow Moss C.E. school, Northern Etchells; County Primary school, Crossacres, Wythenshawe, at £194,385; 20 shops, 30 garages and 30 flats, Baguley Hall site, at £86,821; 5 school canteens for E.C.; reinstatement of Moss Side swimming baths and washhouse at £6,126.

Mansfield.—Notts E.C. propose school at Sherwood Hall-rd., Mansfield. Plans by E. W. Roberts (F.), County A., Shire Hall, Nottingham.

Middlesbrough.—T.C. to erect further 100 B.I.S.F. houses at Thorntree estate.

Middlesbrough.—MacNays, Ltd., engineers, Stockton-st., propose factory.

Middleton.—T.C. propose community centre at Moorclose estate industrial trading site, Stakehill, Sir Herbert Humphreys & McDonald, consulting engineers, Birmingham.—T.C. approved: —Extensions at Haslam-st., Middleton Junction, for Johnston Bros. (Middleton), Ltd.

Newburn-on-Tyne.—S. Milburn & Partners, Y.M.C.A.-bldgs., Fawcett-st., Sunderland, are architects for factory for G. Angus & Co., leather manufacturers, etc., Newcastle.

Newcastle.—City Council preparing scheme for developing aerodrome at Woolsington at £80,000. Plans by City A.

Newcastle (Staffs).—T.C. approved:—Works extensions at Longbridge Hayes for Billington & Newton.

Newport (Mon.).—E.C. to erect Gaer school at cost of £81,000. Plans by Johnson Blackett (F.), Town Hall, Newport.

Oldham.—T.C. approved:—Additions at Heron Mill for Lancashire Cotton Corporation, Ltd., Blackfriars House, Manchester 3.

Oldham.—E.C. propose Primary school and playground at Hathershaw.

Ormskirk.—Rev. R. B. Teeley, P.P. St. Anne's Church, propose day schools at Prescot-rd.

Orrell.—Rev. R. Taybutt, P.P. St. James' R.C. Church propose day schools at St. James'-rd.

Preston.—Board of Management of Royal Infirmary propose out-patients' department and extensions to buildings.

Radcliffe.—T.C. approved:—Additions at Wilton Mills for Lancashire Cotton Corporation, Blackfriars House, Manchester 3; extensions to works at Milltown-st. for Trumeter, Ltd.; additions to works at School-st. for Strebor Diecasting Co., Ltd.

Ripon.—West Riding C.C. propose conversion of Grantley Hall into residential adult college at £12,700.

Rochdale.—T.C. approved:—Hostel at Manchester-rd. for Highams, Ltd.; factory at Toadla. for Hazel & Silks, Ltd.

Rogerstone (Mon.).—Wales and Monmouthshire Industrial Estates, Ltd., Treforest, Pontypridd, to build factory. Plans by Henry Budgen & Co., Westminster House, St. Mary-st., Cardiff.

South Shields.—Page, Son & Hill, 75, King-st., South Shields, are architects for converting first and second floors at Marine hotel, Ocean-rd., into flats for McEwan & Co., Ltd.

South Shields.—Ministry of Town and Country Planning approved E.C.'s plans for erection of Redwell-la. County Secondary school at Prince Edward-rd. Architects are J. H. Morton & Son, Martins Bank-chbrs., Fowler-st., South Shields.

Standish.—Miners' Welfare Commission, Ashley House, Ashtead, Surrey, propose extensions to pithead baths at Victoria Colliery.

Stockport.—E.C. propose Primary school at Longford-rd., North Reddish.

Tarporley.—War Memorial Hospital Board of Management propose extensions.

Tynemouth.—Revised plans are in hand for erection of T.B. pavilion at Moor Park Hospital for T.C.

Tynemouth.—W. Stockdale, Howard-st., North Shields, is architect for mineral water factory at Waterville-rd. for Calverley-Gee, 94, Prudhoe-st., North Shields.

Wallsend.—Tasker & Child, Trinity-bldgs., New Bridge-st., Newcastle-on-Tyne, to prepare plans for flats between Station-rd. and Park-rd. for T.C.

Wallsend.—T.C. approved plans for factory at trading estate for Henderson Bros. (architects, Matkin & Hawkins, Barclays-chbrs., Fawcett-st., Sunderland).

Wark-on-Tyne.—Forestry Commission to build village of 375 houses. T. Sharp is planning consultant to the Ministry.

Warrington.—T.C. approved:—122 houses at Hollows-ave. for Tomlinson & Norbury, builders, Orford Green; additions at 19-21, Sankey-st. for F. W. Woolworth & Co., Ltd.; factory, Liverpool-rd., for J. Crosfield & Sons, Ltd.

West Hartlepool.—Revised plans prepared by Boro. A. for restoration of Seaton Carew swimming baths at £9,000, to include £1,800 for filtration plant.

Witham (Essex).—U.D.C. to proceed with plans for erection of 65 houses on various sites for agricultural workers.

Workington.—T.C. propose 114 houses at Westfield Farm estate.

Worthing.—B.C. to proceed with 84 houses on second section of Maybridge estate. Plans by C. Cowles Voysey (F.), 2, Bunkers-hill, Wildwood-rd., N.W.11.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Barking.—Rebuilding houses at 41-52 and 40-58, Melford-av. C. J. Dawson, Son & Allardyce, architects, 74, East-st., Barking: *A. J. Worthing & Co., Somerville-rd., Chadwell Heath, Essex (cost, £25,528).

Barwell.—Grocery stores at Almays-la., for Barwell and District Co-operative Society, Ltd. Architect's Dept., Co-operative Wholesale Society, Ltd., 1, Balloon-st., Manchester 4: *Archer, Son & Lockley, Shilton-rd., Earl Shilton, Hinckley.

Belfast.—98 houses and four flats at Highfield, for City Council: ‡Robinson & Somerville, Woodland-av., Belfast, £154,896.

Bermondsey.—Rebuilding three-storey offices and warehouse at Tanner-st., for G. Whichelow, Ltd. G. E. Nield & Son, architects, 310, Regent-st., W.1: *John Greenwood, Ltd., King William-st. House, Arthur-st., E.C.4.

Birtley.—Pit-head baths at Ouston "E" Colliery, for Miners' Welfare Commission, Ashley House, Ashstead, Surrey. C. G. Kemp (F.), 5, Old Queen-st., Westminster, London, S.W.1: *G. Gradon & Son, 56, North-rd., Durham.

Bishop Auckland.—36 houses at St. Helens Auckland, for U.D.C.: *J. W. White, Ltd., Sunderland (subject to M.H. approval).

Bootle.—Erection of ex-Servicemen's club, for Orrell and District Veterans' Association, 20, Moss-la., Bootle, Liverpool 20. R. R. Badley, architect, 5, Damfield-la., Maghull: *Heald & Stam, Ltd., 41, North John-st., Liverpool (estimated cost, £6,300).

Boston.—30 additional "Wates" houses at Kirton, for R.D.C. W. R. Beardall, E. & S.: *George Calverley & Sons (Contractors), Ltd., Leicester.

Brighton.—80 houses at Hollingbury Estate, for B.C.: *T. J. Braybon & Son, Princes House, North-st., Brighton (40), £61,868; *Brighton Federation of Master Builders, Brighton (40), £65,447.

Bromsgrove.—18 houses at Sweetpool-la., Hagley, for R.D.C. Folkes & Folkes (F. & A.), architects, 34, Hagley-rd., Stourbridge: *J. Hickman & Son (Brierley Hill), Ltd., Brierley Hill, Staffs, £23,063.

Burnley.—Re-roofing old Gas Retort House, for Transport Garage, for T.C. A. G. Richardson, B.E.: *T. Blackburn & Sons, Ltd., Sellers-st., Blackburn, £6,155.

Bury.—Six houses at Fairfield No. 3 site, for T.C. J. Chadwick, B.E.: †J. Jackson, 79, Chesham-rd., Bury, £7,700.

Cardiff.—14 houses and one block of flats at Cardiff-rd., Eastbrook, Dinas Powis, for R.D.C. Ivor Jones (A.), 6-7, St. John's-sq., Cardiff: *W. B. Fear, Ltd., Western-av., Cardiff, £20,350.

Cheadle, Staffs.—60 houses at Black-la. site, for R.D.C. J. W. Burton, S.: *R. J. Addison, The Spinney, Blythe Bridge, Stoke-on-Trent.

Chelmsford.—10 "Airey" houses at Egbertgdns., Runwell, for R.D.C.: *G. Chalk, Sunnyfield, Sandon, Chelmsford, £13,252.

Chelsea.—Conversion into flats of 24, Hanspl., for Mutual Buildings Development Association. Sydney Tatchell & Son (FF.), Cliffords Inn, Fleet-st., E.C.4: *J. Simpson & Son, 29, Dorset-st., W.1.

Chesterfield.—Extensions at Old-rd. schools, for E.C. Wilcockson & Cutts, architects, 12, Saltergate: *A. Heath, Old-rd., Brampton, Chesterfield, £7,905.

Darlington.—31 houses at Carmel-rd., for North-Eastern Housing Association, Metrovick House, Northumberland-rd., Newcastle-on-Tyne: *G. M. Pearson, Hetton-le-Hole, Co. Durham.

Eastry.—Houses for R.D.C. Four at Stourmouth: *W. R. Andrews, Ramsgate, £5,510; four at Ashley: *F. R. Gosby, Eythorne, £5,371.

Gateshead.—Factory at Ninth-av., Team Valley Estate: *J. R. Rutherford & Sons, Jesmond, Newcastle-on-Tyne.

Hebburn.—12 houses for U.D.C. under small builders' scheme: *F. Wills, South Shields.

Hebburn (Co. Durham).—Further 30 houses, for U.D.C. Architects: Page, Son & Hill, 75, King-st., South Shields: *J. M. Black (Jun.), Ltd., Glen-st., Hebburn (subject to M.H. approval).

Hemel Hempstead.—Two pairs of "Airey" houses at Bovingdon, for R.D.C.: *R. Burgin, Sunnyside, Bovingdon, £6,609 (subject to M.H. approval).

Hereford.—Showrooms, workshop, etc., for Tractors (Hereford), Ltd. Cecil Corey, architect, 40, Cotterell-st., Hereford: *C. Honey, Holmer, Hereford.

Hull.—104 houses "Newland" type and site works, at Brixknell-av., for T.C. A. Rankine (A.), City A.: *Tarran Building Industries, Ltd., Clough-rd., Hull, £157,726.

Ipswich.—Erection of school at Whitton White House, for E.C. Johns & Slater, architects, 8, Lower Brook-st., Ipswich: *Cubitt & Lotts, Ltd., Station Works, Westerfield, Ipswich (amended paragraph).

Ipswich.—Erection of school at Rushmere Hall Farm estate, for E.C.: *George A. Kenney & Sons, Ltd., Army Works, Burrell-rd., Ipswich.

Kingswood.—Temporary offices at Council Yard, for U.D.C., S.: *A. Turner (Bristol), Ltd., 4, Woburn-rd., Eastville, Bristol, £2,705.

Leamington Spa.—50 "Wates" houses, for T.C. H. Fedeski (A.), M.T.P.I., Housing Director: *George Calverley & Sons (Contractors), Ltd., Leicester.

Lichfield.—14 houses at Botany Bay, for R.D.C. J. G. Rimand, S.: *R. T. Rix & Sons, Shenstone Wood End, nr. Lichfield.

Liverpool.—Bakery at Fazakerley, for W. J. Brookes & Son, Ltd. Architects: Derham, McKeith & Partners (L.), Empress-bldgs., Church-st., Blackpool: *Wm. Moss & Son, Ltd., Roscoe-st., Liverpool 1.

London. — Rebuilding 17-21, Erskine-hill, N.W.11, for Improved Industrial Dwellings Co., Ltd. Forbes & Tate (FF.), architects, 3, Weighhouse-st., Grosvenor-sq., W.1: *George Moss (London), Ltd., Dorchester-rd., Northolt Park, Middx.

¶London (Air Ministry).—Contracts to value of £500 or over for week ended November 1:—Building work: F. Rendell & Sons, Ltd., Devizes, Wilts; Unit Construction Co., Ltd., Knutsford, Cheshire; Y. J. Lovell & Sons, Ltd., Gerrards Cross, Bucks. Painting work: Spraycraft Co., Ltd., Bromley, Kent; West Midlands Erection Co., Ltd., Willenhall, Staffs; Thos. Cotton, Ltd., Mansfield, Notts. General maintenance work: Jordans, Northampton.

London (M.O.W.).—Contracts placed by M.O.W. for week ended October 30:—

London: Odessa-rd. School, West Ham, dining-room and school kitchen, H. G. Horswell, Ltd., 182, Green-st., Forest Gate, E.7; Whitmore Estate, Shoreditch, steelwork, S. W. Farmer & Sons, Ltd., 8, Courthill-rd., Lewisham, S.E.13. *Berks*: Princess Margaret Rose School, Windsor, temporary classrooms, Otterway & Try, Ltd., The Causeway, Egham, Surrey. *Ches.*: Birkenhead Park High School, school kitchen and dining-room, Boultons (Bebington), Ltd., Village-rd., Higher Bebington, Wirral, Ches. *Dorset*: C. of E. School, School-la., Sherborne, Dorset, temporary school classroom, kitchen and dining-room, D. Singleton & Son, Central-rd. Works, Yeovil. *Durham*: Hendon Mixed School, Sunderland, classrooms, George Porteous (Bldrs.), Ltd., 16, Norfolk-st., Sunderland. *Fife-shire*: St. Agatha's Roman Catholic School, Methil, Fife, school classrooms, Robert Terras (Junr.), East Wemyss, Fife. *Hampshire*: Hillsea Junior Technical School, Portsmouth, Hants, kitchen and dining-room, Healy & Evans, Ltd., 136, Victoria-rd., North Southsea. *Lanarkshire*: Min. of Nat. Insurance, Mosspark Boulevard, Govan, Glasgow, Lanark, offices, Hugh Broadly, Ltd., 8, Gourock-st., Glasgow. *Lancs*: U.A.T.X., Longridge, Lancs, erection, W. Townson & Son, Ltd., Park Hill, Sawmills, Bolton; Tootal-dr., Salford, Lancs, school kitchen and dining-room. E. B. Jones & Rawlinson, Ltd., 6, Leaf-sq., Salford 6, Lancs; temporary aluminium houses in the Burnley C.B. Area, Contract 1, foundation and site works, W. Grindlay, Ltd., Grandbldgs., Rawtenstall, Rossendale, Lancs. *Leics.*: County Boys' and Girls' School, South Wigston, Leics., temporary school buildings, Sherriff & Co. (1943), Ltd., Gipsy-la. Works, Leicester. *Middx.*: T.O.B., Stanmore, Site B, Middx., patent flat roof and floor construction, etc., Helical Bar & Eng. Co., Ltd., 82, Victoria-st., London, S.W.1. *Midlothian*: Southouse, Edinburgh, Midlothian, Arcon and Tarran houses, Colin Macandrew & Partners, Ltd., 11, West End-pl., Edinburgh 11. *Notts*: M.O.L. Hostel for Polish Miners, W.D. Camp, Hardwick Hall, Sutton-in-Ashfield, Notts, repairs and in-going services, Crooks & Butler, Ltd., Victoria-st., Mansfield, Notts; Newdigate-la. School, Kimberley, Notts, temporary school buildings, H. Beswick, Ltd., 15-17, Wilmott-st., Derby. *Peebleshire*: Hutted Camp, Caledonian-rd., Peebles, adaptations, repairs and redecoration, J. Clyde & Sons, Elcho-st., Brae, Peebles. *Perthshire*: Bridge of Earn, Perthshire, Arcon houses, Purvis Industries, Ltd., Cobden-st., Montrose. *Warwickshire*: Atherstone, R.D.C.1, Warwicks, construction of roads and sewers, foundation and site works for aluminium houses, Orton & Dalby, Ltd., Hugglescote, nr. Leicester. *Yorks*: Leeds, R.O.F., construction of truck for tracked vehicles, Matthews & Sons (Contractors), Ltd., 11, Railway-st., Marsh-la., Leeds 9; Appleton, Roebuck, Yorks, 1 pair of cottages, Sorrell (York), Ltd., 37a, Emerald-st., York.

¶London (War Dept.).—Works contracts placed by War Dept., for week ended October 25:—

Yorks: Roadwork, W. & J. Glossop, Ltd., York. *Lincs*: Miscellaneous work, W. A. Major, Gainsborough.

Lowestoft.—Rebuilding Playhouse Theatre, for F. C. Symonds. Wright & Mason, architects, 10(b), Castle Meadows, Norwich. Building: *Sendall Bros., 85, Lawson-rd., Norwich; plastering and decorations: *Crotch & Son (Norwich), Ltd., Mountergate, Norwich.

Luton.—Extension of Hart Hill Primary school, for B.C. F. Oliver, A.M.I.C.E., B.E.: *Seaward Bros., Neville-rd., Limbury, Luton, £35,672.

Maiden and Combes.—(1) 94 dwellings, Southla.; (2) 26 houses, Church-rd.; (3) 30 houses, Sheephouse-way; (4) roads and sewers for (2) and (3); (5) 18 dwellings, New Malden, for B.C. C. Needham, A.M.I.C.E., B.S. E. C. Harris & Partners, 3, Bedford-sq., W.C.1, quantity surveyors. (1): *C. H. Coates, Ltd., Davis-rd., Surbiton, Surrey, £132,907; (2): *M. J.

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Gleeson, Ltd., London-rd., North Cheam, Surrey, £35,888; (3) *M. J. Gleeson, Ltd., £41,292; (4): *M. J. Gleeson, Ltd., £7,973; (5) *H. T. Jones & Co., Ltd., Marina-av., New Malden, £26,429.

Middleton.—Prefabricated kitchen at Queen Elizabeth's Grammar school, for Lancs E.C. G. Noel Hill (F.), County A., County-bldgs., Fishergate-hill, Preston: *Ashton Smethurst (Builders), Ltd., Suffield-st., Middleton, nr. Manchester, £2,750.

Mitcham (Surrey).—Extensions to factory at Western-rd., for Hadfields (Merton), Ltd. Wallis, Gilbert & Partners, architects, 5, Cromwell-rd., South Kensington, S.W.: *Higgs & Hill, Ltd., Crown Works, South Lambeth-rd., S.W.8.

Newcastle-on-Tyne.—58 houses. Architect: Merton McKenzie, Mosley-st., Newcastle: *Fisher & Co., Belle Vue-gdns., Low Fell, Gateshead.

Newcastle-on-Tyne.—12 houses. Plans by Dryden & Shaw, Market-st., Newcastle: *Palmer & Wilson, Fenham Hall-dr., Newcastle.

Newcastle-on-Tyne.—Alterations and extensions to premises of Baker & Co., Blenheim-st. Plans by Hetherington & Wilson, County-chbrs., Westgate-rd., Newcastle: *Stanley Miller, 17, North-st., Newcastle.

Nottingham.—Erection of Western-Boulevard Primary school, for City Council: ‡G. A. Pillatt & Sons, Ltd., Nottingham, £64,380.

Oxford.—Alterations and additions to Oxford and District Eye Hospital. H. H. Clark (F.), architect, Victoria House, Queen Victoria-st., Reading: *Knowles & Son (Oxford), Ltd., 36, Holywell, Oxford.

St. Helens.—Pithead baths at Cronton Colliery, Prescot, for Miners' Welfare Commission, Ashley House, Ashstead, Surrey. C. G. Kemp (F.), 5, Old Queen-st., Westminster, London, S.W.1: *J. Yearsley & Sons, Ltd., Fenton-st., St. Helens, Lancs.

Spalding.—50 "Wates" houses at Crowland, for R.D.C. F. Bernard Saunders, A.I.A.A., Architect and Surveyor: *George Calverley & Sons (Contractors), Ltd., Leicester.

Stanley.—24 houses at Lime-la. Pit estate, for U.D.C.: *Duncan F. Mann & Sons, Ltd., 33, Dolphin-la., Thorpe, £28,482 (subject to M.H. approval).

Stockport.—116 houses at Woodlands-dr. and Sterndale-rd. sites, for T.C. Wm. F. Gardner, B.S. 56: ‡F. Marsland, 7, Bullock-st.; 60: ‡J. Foulkes & Son, Wicken-st., Offerton-la. (both of Stockport).

Surbiton.—Rebuilding seven houses at Red Lion-rd. and Derby-rd. Nightingale, Page & Bennett, architects, Eagle-chbrs., Kingston-on-Thames: *Thorogood & Son, 55, Bond-rd., Surbiton.

Upton-on-Severn.—20 houses on two sites, for R.D.C. H. E. Frith, S.: *Perks Bros., Priestla., £31,733, and *T. A. Simpkins, 66, High-st., £32,306 (both of Pershore).

Urmston.—39 houses, two flats and six bungalows at Section "B," Woodsend estate, Flixton and Winchester-rd., Davyhulme, for U.D.C. E. L. Leeming, E. & S. 39 and two flats: *J. Maunders & Sons, Ltd., 554, Barton-rd., Stretford, Manchester, £43,627; six bungalows: *A. Locke (1940), Ltd., 166, Lostock-rd., Davyhulme, Urmston, £5,164.

Usworth (Co. Durham).—Conversion of school into clothing factory for Pawson & Son. Architects: Hetherington & Wilson, County-chbrs., 52, Westgate-rd., Newcastle-on-Tyne: *R. C. Williamson, Rowlands Gill, Co. Durham.

Wallasey.—Extensions at Transport offices, for T.C. R. F. B. Grundy, B.E.: *H. G. B. Construction Co., Ltd., Moreton, Wirral, £2,615.

Wallsend.—For new factories on trading estate: *Henderson Bros., Smith-st., Tyne Dock, South Shields.

Walthamstow.—Rebuilding 24 houses, for B.C.: ‡Direct Labour, £29,719.

Whitley Bay.—12 houses at Seatonville estate, for U.D.C. E. Roberts, S.: *Direct Labour (in place of tender withdrawn).

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27, JOHN ADAM STREET, ADELPHI, W.C.2
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FOR FACTORY CONSTRUCTION
NEGUS is the name!

GALBRAITH
BROTHERS LIMITED
trusts that all Builders will accept the invitation of the National Federation of Building Trades Employers and the London Master Builders' Association to visit the Club Room at the
BUILDING EXHIBITION
OLYMPIA - - NOV. 19—DEC. 4

UILDING EXHIBITION, OLYMPIA, NOV. 19—DEC. 4, 1947

The Twenty-second Building Exhibition will be opened at Olympia on Wednesday next, November 19, by the Rt. Hon. Charles Key, M.P., Minister of Works. The chair will be taken by Sir Lancelot Keay, K.B.E., President of the Royal Institute of British Architects. Sir Giles Gilbert Scott, O.M., R.A., P-P.R.I.B.A., will propose a vote of thanks. Visits and meetings of a large number of professional institutions have been arranged. There follows a complete list of exhibitors, with "The Builder" Exhibition Plan, and elsewhere in this issue is given a preliminary review of exhibits of interest to the building industry.

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DEPT. ARCHITECTURE

A.

ey Tile Co., Ltd. (Row M. 243).
.E. Machinery, Ltd. (Row O. 259).
eson, M. B., Ltd. (Row J. 186).
ow Engineers, Ltd. (Row E. 95).
ivarc. (Row S. 305).
mite Co., Ltd. (Row E. 85).
msez, Ltd. (Row C. 49).
ostyle, Ltd. (Row L. 232).
ned Basic Chemicals, Ltd. (Row T. 313).
as Electric, Ltd. (Row G. 143).
m, E. P., & Co., Ltd. (Row Q. 281).
ed Paints & Chemicals, Ltd. (Rows H. 153, J. 192).
minium Development Association (Row Q. 282).
minium Window Co. (Row P. 267).
lerson, C. F., & Son, Ltd. (Row L. 222).
lerson, D., & Son, Ltd. (Row F. 113).
lrews Bros. (Bristol), Ltd. (Row Q. 284).
elm Odling & Sons (Row F. 120).
rchitect & Building News," The (Row G. 127).
hitects Classifile, Ltd. (Row L. 234).
hitectural Association, The (Gal. 377).
nand Dutry & Co. (Adeco, Ltd.) (Row 236D).
nstrong Cork Co., Ltd. (Row J. 173).
ot Gas Waters Heaters, Ltd. (Row N. 252).
lhalt Council (Row C. 53).
ociated Clay Industries (Row J. 178).
tins of East Ham, Ltd. (Row R.•292).
ex Products Decorations, Ltd. (Row K. 197—8).

B.

ackyards" (Gal. 382, 384, 386).
cer, W. F. (Row T. 316).
lham's (Row L. 236B; Gal. 320).
rus, E. P., Ltd. (Row G. 138).
h & Portland Stone Firms (Row E. 93).
3. Chemical Co. (Row B. 27).
lford, Ltd. (Row N. 249).
ger, Lewis, & Sons, Ltd. (Row P. 272).
mingham Steel Co., Ltd. (Row R. 286).
umen Industries, Ltd. (Gal. 319, 321).
w Knox, Ltd. (Row R. 288).
ulton & Paul, Ltd. (Row R. 287).
vdell, E., & Co., Ltd. (Row N. 253).
aby, F., & Co., Ltd. (Row K. 214).
adley & Craven, Ltd. (Row K. 203).
dgwater Brick & Tile Association (Row D. 73).
ggs & Sons, Ltd. (Row B. 32).
tish Electrical Development Association (Row F. 111).
tish Equipment Co., Ltd. (Row D. 66).
tish Gas Council (Row P. 273).
tish Hoist & Crane Co. (Row D. 60).
tish Pressed Panels, Ltd. (Row G. 145).
tish Structures Institute (Row T. 311).
tish Steel Work Association (Row C. 44).
tish Railways (Gal. 351).
cton School of Building (Gal. 350).
nad & Co. (Row K. 216).
ckhouse, J., & Co., Ltd. (Row A. 12).
yce, White & Co., Ltd. (Row E. 82).
ydon Construction Co., Ltd. (Row F. 102).
ckland Sand & Silica (Row G. 137).
"Builder," The, Ltd. (Row G. 125).
"Building," (Row L. 225).
Building Centre (Gal. 372A).
Building Industries (Row H. 169).

C.

Cambridge Artificial Stone Co., Ltd. (Row H. 160).
Candy & Co., Ltd. (Row F. 122).
Carter & Co., Ltd. (Row D. 74).
Cellon, Ltd. (Row H. 166).
Celotex, Ltd. (Row H. 172).
Cementation Co., Ltd. (Row D. 78).
Cement Marketing Co., The (Row F. 114).
Cement Supply Co., Ltd. (Row B. 26).
Century Wallboards, Ltd. (Row O. 256).
Chadwick & Shapcott, Ltd. (Row F. 121).
Chaseside Engineering Co., Ltd. (Row C. 58).
Cheecol Processes, Ltd. (Row E. 97).
Christopher, J., & Sons (Row F. 104).
Cimex, Ltd. (Row J. 182).
Clark, J., & Eaton, Ltd. (Row L. 224).
Clubley Armstrong Danarm, J. (Row N. 255A).
Coal Utilisation Joint Council (Row E. 99 and 100).
Code Lock, Ltd. (Row B. 33).
Cohen, G., & Sons, Ltd. (Rows C. 55 and D. 64).
Cole, E. R., Ltd. (Row H. 170).
Colt, W. H. (London), Ltd. (Row L. 223).
Copperad, Ltd. (Row A. 7).
Copper Development Association (Row Q. 278).
Council of Industrial Design (Gal. 331–2–3–4).
Crawley Tools, Ltd. (Row O. 257).
Crittall Manufacturing Co., Ltd., The (Row E. 86).
Crittall, R., & Co., Ltd. (Row A. 5).
C.S.A. Industries, Ltd. (Row K. 208).
Cunliffe Owen Aircraft, Ltd. (Rows H. 149, J. 196).
Cuprinol, Ltd. (Row S. 302).

D.

Danckaerts Woodworking Machinery, Ltd. (Row F. 105).
Davis, H. & C., & Co., Ltd. (Row S. 298).
De La Rue Gas (Row Q. 277).
De La Rue Insulation, Ltd. (Row H. 162).
Dean, J. (Row D. 65).
Denton & Jutsum, Ltd. (Row O. 265).
Department of Industrial and Scientific Research (Gal. 323, 324, 325, 326, 327, 328).
Dixon, R. G. & Co., Ltd. (Row Q. 283).
Dohm, Ltd. (Row B. 24).
Domestic Supply (Row T. 315).
Downing, G. H., & Co., Ltd. (Row G. 134).
Draught-proof Fitment Co., Ltd. (Gal. 340).
Drew, Clark & Co., Ltd. (Row B. 34).
Dryhard Paint and Varnish Co. (Gal. 338).
Dunlop Rubber Co., Ltd. (Row H. 157).
Durafencing, Ltd. (Row G. 141).
Durasteel Roofs, Ltd. (Row C. 45).

E.

Easiclene Enamel (1938) Ltd. (Row L. 230).
Easiwork, Ltd. (Row A. 10).
East Ham Technical College (Gal. 374).
Eastwoods, Ltd. (Row H. 163).
Eclipse Rail-Track Ladder Co., Ltd. (Row P. 274).
Educational Publicity, Ltd. (Gal. 388).
Economic Water Softeners, Ltd. (Row J. 190).
Electrolux, Ltd. (Row R. 291).
Elsy & Gibbons, Ltd. (Row E. 100A).
Empire Tea Bureau (Gal. 383).
English Clock System, Ltd. (Row K. 217).
English Joinery Manufacturers' Association (Row S. 299 and 300).
Everburne Sales and Service (Row A. 6).
Evos, Ltd. (Row B. 36).
Ewart (Row Q. 276).
Expanded Metal Co., Ltd. (Row E. 84).
Expandite, Ltd. (Row A. 1).

F.

Federation of Master Builders (Gal. 329).
Felco Hoists, Ltd. (Rows C. 54, K. 209).
Ferguson, Edwards, Ltd. (Row N. 250).
Fielding & Son (Werneth) Ltd. (Row H. 155).
Finch, B., & Co., Ltd. (Row A. 13).
Fisher & Ludlow, Ltd. (Row H. 148).
Fisons, Ltd. (Row J. 184).
Fleming Electrical Corporation (Gal. 387, 389).
Flexible Non-Metallic Conduits, Ltd. (Row J. 179).
Flexo Plywood Industries, Ltd. (Row N. 245–6).
Flextol Engineering Co., Ltd. (Row C. 46).
Floor Renovations, Ltd. (Row J. 187).
Flush Door Manufacturers' Association (Row D. 69).
Foamed Slag Producers' Federation (Row H. 158).
Forest Research (Row S. 297).
Forsters Machine Co., Ltd. (Gal. 318).
Freeman, J. & Sons (Row C. 39).
French, Thos. & Sons, Ltd. (Row E. 94).
Fibreglass, Ltd. (Row L. 229).

G.

Gascoigne, G. H., Co., Ltd., The (Row J. 180).
George Bros. (Paints) Ltd. (Row R. 296).
Gerver, H. (Row T. 308).
Gibbs Construction, Ltd. (Row T. 309).
Gliksten Doors, Ltd. (Row G. 126).
Goodwin, Barsby & Co., Ltd. (Row M. 241).
Grangersol, Ltd. (Gal. 380).
Grant & West, Ltd. (Row A. 11).
Greenham (Plant Hire) Ltd. (Row H. 154, J. 191).
Grindrod, P. W. (Gal. 360).

H.

Hall, R. (Row J. 174).
Hall, Harding, Ltd. (Gal. 317).
Halliday Boilers, Ltd. (Row A. 3).
Harvey, G. A., & Co. (London) Ltd. (Row G. 131).
Hermeseal (Row C. 41).
Hesketh, Gordon (Row N. 255).
Heyman, B. (Gal. 322).
Hickson's Timber Impregnation Co. (G. B.) Ltd. (Row E. 97A).
Highways Construction, Ltd. (Rows H. 151, J. 194).

BUILDING TRADES EXHIBITION • OLYM

MPIA • NOVEMBER 19—DECEMBER 4 1947

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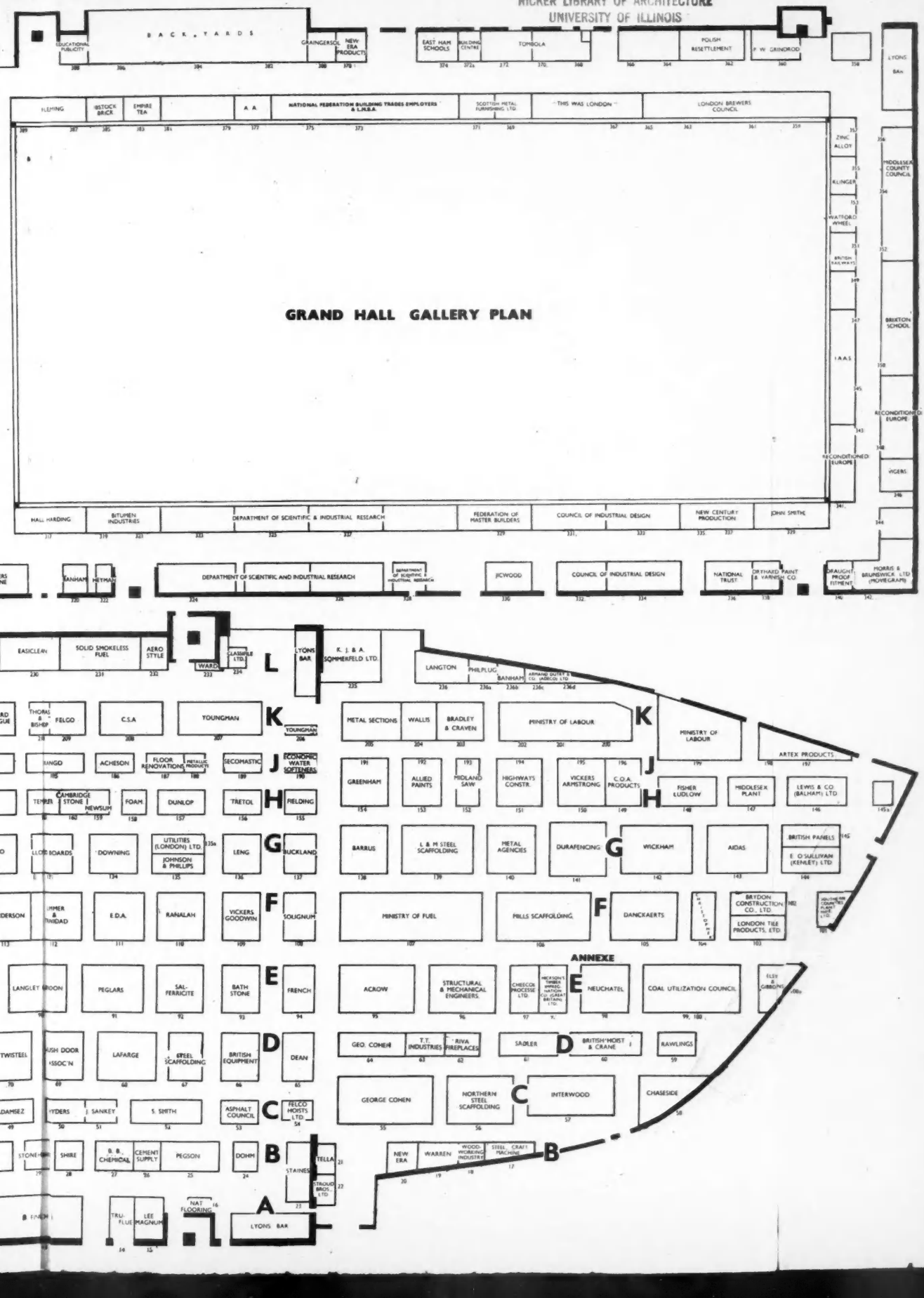

Hills, F., & Sons, Ltd. (Row R. 290).
Hitchens Flush Woodwork, Ltd. (Row M. 238).
Holcon, Ltd. (Row M. 242).
Holden Frost Protector Co., The (Gal. 391.)
Hope, Henry, & Sons, Ltd. (Row D. 79).
Housing Centre (Gal. 402).
Hurcal Engineering Co., Ltd. (Gal. 393).
Hurry Water Heater, Ltd. (Row B. 35).
Hurseal, Ltd. (Row N. 254).
Hyders, Ltd. (Row C. 50).
Hyspecon, Ltd. (Gal. 399).

I.

Ibstock Brick and Tile Co., Ltd. (Gal. 385).
Ide, T. & W., Ltd. (Row O. 262).
Ideal Boilers and Radiators, Ltd. (Row Q. 280).
Illustrated Carpenter and Builder (Row T. 312).
Imperial Chemical Industries, Ltd. (Row D. 76).
Incorporated Association of Architects and Surveyors (Gal. 345, 347).
Interwood, Ltd. (Row C. 57).
Insulation Building and Hard Board Association (Row E. 83).

J.

Jenson & Nicholson, Ltd. (Row S. 301).
Jicwood, Ltd. (Gal. 330).
Johnson & Phillips, Ltd. (Row G. 135).
Joinery and Builders' Supply, Ltd. (Row R. 295).
Joyce, W. N., & Sons, Ltd. (Row J. 183).

K.

Kango Electric Hammers, Ltd. (Row J. 185).
Kennedy, W. (Row K. 218).
King, G. W. (Row K. 215).
King, J. A., & Co., Ltd. (Row F. 118).
King's Langley Engineering Co. (Gal. 398).
Klinger, Richard, Ltd. (Gal. 355).
Konquest Products, Ltd. (Row K. 219).

L.

Lafarge Aluminous Cement Co. (Row D. 68).
Langley (London) Ltd. (Row E. 90).
Langton, H. S. (Row L. 236).
Lead Industries Development Council (Row J. 175).
Lee Magnum Engineering Works (Row A. 15).
Leng, C., & Sons, Ltd. (Row G. 136).
Lewis & Co. (Row H. 146).
Lillington, G., & Co., Ltd. (Row B. 37).
Limmer and Trinidad Lake Asphalte Co., Ltd. (Row F. 112).
Liner Concrete Machinery Co. (Row M. 240).
Lloyd Boards, Ltd. (Row G. 133).
Lloyds Bank, Ltd. (Row M. 244).
Logicoal Coal Bunkers (Gal. 401).
London Brewers' Council (Gal. 359, 361, 363, 365).
London Brick Co., Ltd. (Row E. 87).
London Master Builders' Association (Gal. 373, 375).
London and Midland Steel Scaffolding Co., Ltd. (Row G. 139).
London Sand Blast and Decorative Glass Works, Ltd. (Row G. 130).
London Tile Products, Ltd. (Row F. 103).

M

Magnet Timber, Ltd. (Row O. 258).
Marley Tile (Holding) Ltd. (Row H. 164).
Mallinson, Wm. & Sons, Ltd. (Row E. 89).
Mechanical Equipment, Ltd. (Row A. 4).
M.E. Engineering, Ltd. (Row Q. 275).
Metal Agencies Co., Ltd. (Row G. 140).
Metallic Products, Ltd. (Row J. 188).
Metal Sections, Ltd. (Row K. 205).
Meyer, M., Ltd. (Row C. 40).
Middlesex Contractors Plant, Ltd. (Row H. 147).
Middlesex County Council Education Committee (Gal. 352, 354, 356).
Midland Bank, Ltd. (Row A. 8, 9).
Midland Saw and Tool Co., Ltd. (Row H. 152 and J. 193).
Millars Machinery Co., Ltd. (Row M. 239).
Mills Scaffold Co., Ltd. (Row F. 106).
Ministry of Fuel and Power (Row F. 107).
Ministry of Labour and National Service (Row K. 199, 200, 201, 202).
Murray & Jones, Ltd. (Row N. 248).
Moviegram (Equipments) Ltd. (Gal. 342, 344).

N.

"National Builder" (Row M. 237).
National Federation of Clay Industries (Row C. 42).
National Flooring Co., The (Row A. 16).
National Trust (Gal. 336).
Neal, R. H., Ltd. (Row R. 294).
Nettlefold & Sons, Ltd. (Row D. 77).
Neuchatel Asphalte Co., Ltd. (Row E. 98)
"New Century" Products, Ltd. (Gal. 335, 337).
New Era Domestic Products, Ltd. (Gal. 378).
New Era Publishing Co., Ltd. (Row B. 20).
Newsum, H., Sons, & Co., Ltd. (Row H. 159).
Noelite, Ltd. (Row H. 168).
Northern Steel Scaffolding Co., Ltd. (Row C. 56).

O.

"Official Architect" (Row T. 310).
Oliver, Wm., & Sons, Ltd. (Rows E. 81 and C. 123).
O'Sullivan, E. (Kenley) Ltd. (Row G. 144).

P.

Paint Removers, Ltd. (Row B. 38A).
Parker, Fredk., Ltd. (Row P. 270).
Parsons, Thos., & Sons, Ltd. (Row F. 117).
Peerless Built-in Furniture, Ltd. (Row O. 260).
Peglers, Ltd. (Row E. 91).
Pegson, Ltd. (Row B. 25).
Pestcure, Ltd. (Gal. 394).
Philplug Products, Ltd. (Row L. 236A).
Pioneer Mixers, Ltd. (Row S. 306).
Pilkington Bros., Ltd. (Row G. 129).
Polish Resettlement (Gal. 362).
Prodorite, Ltd. (Row L. 228).

R.

Ranalah Sales Corporation, Ltd. (Row F. 110).
Ransomes & Rapier, Ltd. (Row K. 212, 213).
Rawlings Bros. Ltd. (Row D. 59.).
Rawlplug Co., Ltd. (Row L. 227).
Reconditioned Europe (Gal. 341, 343, 348).
Red Circle, Ltd. (Row P. 274a).
Redhill Tile Co., Ltd. (Row E. 88).
Rentokil, Ltd. (Gal. 392).
Rippers, Ltd. (Row H. 167).
Riva Fireplaces Co., Ltd. (Row D. 62).
Romac Industries, Ltd. (Gal. 390).
Roneo, Ltd. (Row G. 132 and Gal. 396).
Ronuk, Ltd. (Row F. 115).
Ruberoid Co., Ltd. (Row Q. 279).
Runcolite, Ltd. (Row D. 80).
Russell, Macdonald & Co., Ltd. (Row C. 48).

S.

Sadler, T., Sons, & Co. (Row D. 61).
Sal Ferricite and Trading Co., Ltd. (Row E. 92).
Sankey, J., & Sons, Ltd. (Row C. 51).
Scaffolding (Gt. Britain) Ltd. (Row G. 124).
Scotney, T. M. (Row S. 303).
Scottish Metal Furnishings, Ltd. (Gal. 369, 371).
Sealocrete Products, Ltd. (Row J. 181).
Secomastic, Ltd. (Row J. 189).
Semet, M., & Co. (Row B. 31).
Semtex, Ltd. (Row C. 43).
Sharp Bros. & Knight, Ltd. (Row P. 268).
Sherwoods Paints, Ltd. (Row C. 47).
Shetack Tool Works, Ltd. (Row S. 304).
Shires & Co. (Ldn.) Ltd. (Row B. 28)
Silexine Paints, Ltd. (Row H. 165)
Silicaseal, Ltd. (Gal. 400).
Slingsby, H. C. (Row K. 220).
Smith, J., & Co., Ltd. (Gal. 339).
Smith, Sydney (Industries) Ltd. (Row C. 52).
Solid Smokeless Fuels Federation (Row L. 231).
Solignum, Ltd. (Row F. 108).
Sommerfeld, K. J., & A., Ltd. (Row L. 235).
Southern Counties Plant Hire, Ltd. (Row F. 101).
Staines Kitchen Equipment Co., Ltd. (Row B. 23).
Standard Catalogue Co., Ltd. (Row K. 211).
Steelcraft Machine Co. (London) Ltd. (Row B. 17).
Steel Scaffolding Co., Ltd. (Row D. 67).
Stephens & Carter, Ltd. (Row R. 293)
Stonehenge Bricks, Ltd. (Row B. 29).
Stothert & Pitt, Ltd. (Row O. 263 and 264).
Stroud Bros., Ltd. (Row B. 22).
Structural and Mechanical Development Engineers, Ltd. (Row E. 96).
Sundeala Board Co., Ltd. (Row L. 226).
Sussex and Dorking United Brick Cos. (Row F. 199).

T.

Tella (Row B. 21).
Templer, C. G., & Co. (Row H. 161).
Tentest Fibre Board Co., Ltd. (Row F. 116).
"This Was London" (Gal. 367).
Thomas & Bishop, Ltd. (Row K. 210).
Thompson, Beacon Windows, J., Ltd. (Row P. 271).
Timber Development Association (Row O. 261).
Timber and Plywood (Row L. 221).
Tombola (Gal. 368, 370, 372).
Torrance & Sons, Ltd. (Row O. 264).
Trade Chronicles, Ltd. (Row B. 18).
Tretol, Ltd. (Row H. 156).
Trianco, Ltd. (Row P. 266 and 269).
True Flue, Ltd. (Row A. 14).
T.T. Industries (Row D. 63).
Tungum Sales Co., Ltd. (Row T. 307).
Turner, C., & Sons, Ltd. (Row D. 75).
Twisteel Reinforcement, Ltd. (Row D. 70).

U.

Union Glue and Gelatine, Ltd. (Row B. 34A)
Universal Cleaning and Restoration Co., Ltd (Row J. 177).
Utilities (London) Ltd. (Row G. 135A).
Uva Products, Ltd. (Row B. 30).

V.

Vent Axia, Ltd. (Row A. 2).
Vickers Armstrong, Ltd. (Row H. 150 and J. 195).
Vickers Goodwin, Ltd.(Row F. 109).
Vigers, A., Sons, & Co., Ltd. (Gal. 346).
Vitreflex, Ltd. (Row Q. 285).
Vulcan Products, Ltd. (Row B. 38).

W.

W.B. Hollow Blocks (Row J. 176).
Wallis & Co., Ltd. (Row K. 204).
Ward's Flexible Rod Co., Ltd. (Row L. 233)
Warerite, Ltd. (Row D. 71).
Warren Marketing, Ltd. (Row B. 19).
Watford Wheel and Truck Works (Gal. 353)
Weldall and Assembly, Ltd. (Row N. 247).
Whitcliff Corporation, Ltd. (Row T. 314).
Wickham Engineering Co., Ltd. (Row G. 142)
Williams & Williams, Ltd. (Row D. 72).
Wilsons of Enfield (Row R. 289).
Winget, Ltd. (Row N. 251).
Woodworking Industry (Row B. 18).

Y.

Yorkshire Copper Works, Ltd. (Row G. 128)
Youngman, W. C., Ltd. (Row K. 206 and 207).

Z.

Zinc Alloy Rust Proofing Co., Ltd. (Gal. 357)
Zinc Development Association (Row H. 171)